EDICAL LIBRARY

OCT 2 1946

THIS ISSUE CONTAINS 5,300 COPIES

TEXAS State Journal of Medicine

OWNED BY THE STATE MEDICAL ASSOCIATION OF TEXAS

ISSUED MONTHLY BY THE BOARD OF TRUSTEES

Office of Publication, 1404 West El Paso St., Fort Worth 3, Texas.
Entered as Second Class Matter July 1, 1905, at the Postoffice at Fort Worth, Texas, under act of March 3, 1879.
Copyright 1946 by the State Medical Association of Texas.

Vol. XLII No. 5 Fort Worth, Texas, September, 1946 $3.00 Yearly

CONTENTS

EDITORIALS— Page

The Official Family for 1946-1947 301
The Status of National Health and Medical Legislation 304
The Hill-Burton Bill 305
New Films for the Motion Picture Library 307
University of Texas Postgraduate Program 307
Dr. S. E. Thompson Resigned 308

Current Editorial Comment

Migraine and its Association to Allergy 308

ORIGINAL ARTICLES—

Diagnosis of Liver Abscess by Means of Thorotrast Hepatosplenography. *Robert J. Reeves and Karl A. Youngstrom* 310
Para-Aminobenzoic Acid in the Treatment of Endemic Typhus Fever. *Moise D. Levy and W. T. Arnold* 314
Prostigmine Usage in Pediatrics. *Guy A. Tittle* 316
Water in Relation to Health Problems in Children in Texas. *Arild E. Hansen* 320
Cleaning Traumatic Wounds by Multiple Fine-Stream Pressure Irrigation—an Improved Method. *J. Peyton Barnes* 322
Management of Prostatic Surgery in the Aged. *James P. Bridges* 325
Primary Carcinoma of the Gallbladder. *Francis J. Kelly and Terrell Speed* 327
Fungus Infections of the Cornea: Case Report of Keratomycosis Due to Monilia. *E. M. Sykes* 330
An Epidemiological Investigation of Typhus Fever in Texas, 1943-1945. *J. V. Irons and George W. Cox* 322
Teamwork in Cancer Control. *J. Louis Neff* 336

MISCELLANEOUS—

Coming Meetings and Clinics 339
Hospitals Needing Interns and Residents 339
State Board of Medical Examiners 339
Medical Officers Returning to Texas 340
Tumor Seminar at San Antonio 341
Congress on Industrial Health 341
Military Surgeons Convention 341
Oklahoma City Clinical Conference 341
American Public Health Association 341
Dallas Health Museum 342
Inter-American Cardiology Congress 343
Library Notes 343
News 344
Society News 346

AUXILIARY NOTES—

Auxiliary News 347
Book Notes 348
Deaths 349

STATE MEDICAL ASSOCIATION OF TEXAS

President, DR. C. C. CODY, JR., Houston. **President-Elect: DR. B. E. PICKETT, SR., Carrizo Springs.**
Secretary, DR. HOLMAN TAYLOR, Fort Worth. **Treasurer, DR. K. H. BEALL, Fort Worth.**
Board of Trustees: DRS. T. C. TERRELL, E. A. ROWLEY, J. B. McKNIGHT, W. B. RUSS, E. W. BERTNER.

New (5th) Edition—CURTIS' GYNECOLOGY

Just Issued. This book is thoroughly up-to-date having just been completely revised.

It is the present-day practice of a leading teacher-specialist who, from years of experience, knows exactly what is needed in a book of this type. Practitioner, gynecologist and student emphases have been balanced and blended with rare skill so that in toto Dr. Curtis has adequately met the everyday needs of all who will use this book.

Basic principles are clearly set forth, including one of the most complete and instructive descriptions of pelvic anatomy existing in the literature—a description immeasurably enhanced with illustrations by the well-known medical artist, Tom Jones, who literally worked beside Dr. Curtis as the dissections were made.

Dr. Curtis sets forth the most recent proved diagnostic procedures, taking up physical, laboratory and instrumental examination. Treatment, being both medical and surgical, takes in the most recent methods and technics, including such agents as penicillin and the newer endocrine preparations.

Amplifying the text matter of really classic quality are more than 600 beautifully executed pictures on 455 figures, 36 of them in color.

By ARTHUR HALE CURTIS, M. D., Professor and Chairman of the Department of Obstetrics and Gynecology, Northwestern University Medical School. 755 pages, 6¼"x9½", with more than 600 illustrations on 455 figures, including 36 in colors. $8.00

J. A. MAJORS COMPANY

1301 Tulane Ave., New Orleans, 13, La.
Medical Arts Building, Dallas 1, Texas.

When writing advertisers please mention this Journal

BALYEAT
HAY FEVER AND ASTHMA CLINIC

DEVOTED EXCLUSIVELY to the DIAGNOSIS and TREATMENT of ALLERGIC DISEASES

··· OSLER BUILDING ···

OKLAHOMA CITY · · · OKLAHOMA

JAMES A. WALLACE, M. D.
Medical Director

S. N. BRINSON, M. D.
Medical Director

CHAS. W. MILLER, JR., M. D.
Psychiatrist

WALTER R. WALLACE
Business Manager

THE WALLACE SANITARIUM
Memphis, Tennessee

For the Diagnosis and Treatment of Nervous and Mental Diseases, Drug Addiction and Alcoholism

Texas State Journal of Medicine

EDITORIAL OFFICES: 1404 W. El Paso Street, Fort Worth 3, Texas
HOLMAN TAYLOR, B. S., M. D., EDITOR-IN-CHIEF
R. B. ANDERSON, JR., A. B., M. D., ASST. EDITOR
HARRIET CUNNINGHAM, B. J., M. A., ASST. TO EDITOR

COUNCILORS

1. RALPH H. HOMAN, *El Paso*
2. A. H. FORTNER, *Sweetwater*
3. H. H. LATSON, *Amarillo*
4. O. N. MAYO, *Brownwood*
5. C. E. SCULL, *San Antonio*
6. W. E. WHIGHAM, *McAllen*
7. R. T. WILSON, *Austin*
8. F. J. L. BLASINGAME, *Wharton*
9. GHENT GRAVES, *Houston*
10. A. E. SWEATLAND, *Lufkin*
11. J. M. TRAVIS, *Jacksonville*
12. G. V. BRINDLEY, *Temple*
13. R. G. BAKER, *Fort Worth*
14. C. C. NASH, *Dallas*
15. C. A. SMITH, *Texarkana*

Vol. XLII **September, 1946** **No. 5**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION AND PUBLIC HEALTH IN TEXAS

The Official Family for 1946-1947.—As per an annual custom of many years standing, there is published herewith, early in the administration year, the names of all officers and members of boards, councils, and committees upon whom will fall the responsibility of the affairs of the Association during the current year. The purpose of publishing these names is threefold: first, as a matter of record; second, to honor them for the tasks they will assume; third, and of the greatest importance, to facilitate the work of the Association.

And to aid the last named purpose an effort will be made to discuss briefly the duties and functions of the different groups for the benefit of any of our readers not familiar with the machinery of the Association and how it works.

First, the President is the official who brings leadership to all Association affairs. On him and the Secretary, more than any other, falls the responsibility of seeing to it that the Association maintains a steady dynamic progress in all of its manifold purposes. The President-Elect and Vice-Presidents, are understudies in these endeavors, while the Treasurer is all that the name implies, custodian of the financial assets of the Association.

The Board of Trustees constitute the board of directors of our organization. They manage completely its financial affairs, with the Secretary as the executive officer for the Board. Not only the spending of money and the management of investments for the Association and all of its properties, including the Library, but the employment and salaries of the personnel in the central office, are their duties. Also, they are the board of publication for the JOURNAL and with the Editor, who is employed by the Board, have full responsibility for the management of the official publication of the Association, the TEXAS STATE JOURNAL OF MEDICINE.

The Board of Councilors carry heavy responsibilities for the Association. The Association looks to them as leaders in their respective districts in all its affairs. The activities of individual members, and of county medical societies, both scientific and organizational, are their responsibilities. All matters pertaining to ethics and professional conduct are within their sphere. Each councilor has a vice-councilor who is both an understudy and aid in the discharge of councilor duties, and a substitute in case of incapacity of the councilor to act.

Our delegates to the American Medical Association are freighted with the responsibility of properly representing our Association in the national body, and are our liaison with the parent body in its activities and our own.

The major year around activities of the Association are wisely centered in councils and committees with overlapping terms of office.

Our Council on Medical Defense sees to it that our members are protected, under definite regulations from unjustified malpractice suits.

The Council on Scientific Work, together with the officers of the eight scientific sections, who, with the President and Secretary are ex-officio members, have complete charge of and make all arrangements for the scientific programs, scientific exhibits, and myriad details connected with our annual sessions in coöperation with other special committees and important local committees.

Our Council on Medical Economics is charged with unusually heavy responsibilities in determining for the Association the facilities for medical services in the state, existing deficiencies, and plans and programs to make better medical services available to all classes of people at fees they can afford to pay and under conditions which are fair and equitable to the medical profession.

Our Committee on Legislation has the considerable responsibility of causing to be enacted legislation which is in the public interest as far as medicine and the public health are concerned, and of opposing such legislation as may be hurtful to the public. This year in particular will be one of unusual significance in that connection. The Association proposes to sponsor legislation which will eliminate, as far as legislation can, the charlatan and the quack in Texas.

The functions of such groups as the Committees on Collection and Preservation of Records, Health Problems in Education, Cancer, and Postgraduate Medical Education, are all implied in their titles. President Cody is especially desirous of seeing studies and recommendations made that will materially improve postgraduate opportunities in medicine in Texas.

The Committee on Tuberculosis was given a higher status as a standing committee with overlapping terms of office by amendment to the By-Laws at the last annual meeting of the House of Delegates, with the thought that this disease in Texas warrants special study.

Special committees whose members are appointed for one year only do much of the Association's work. The titles of these committees are indicative of their functions. Each member of each of these committees has been carefully selected by the President because of his particular qualifications for the task at hand.

Among these might be mentioned the Committee on Medical Education and Hospitals, whose functions may well assume extraordinary proportions as a result of the enactment of the Hill-Burton bill into law by the last Congress.

In accordance with recommendations of the last House of Delegates, a special Committee on Revision of the Constitution and By-Laws was set up, composed of the President, President-Elect, Board of Trustees, and Secretary, who will make a careful revision of the Constitution and By-Laws for the consideration of the next House of Delegates.

The Public Relations Committee will continue to be charged with a great responsibility in seeing that the affairs of medicine, and of the State Medical Association in particular, are presented in a proper light and in an understandable way to the public and, as for that, to members of the medical profession itself.

President Cody continued the old Procurement and Assignment Committee of wartime into the present turbulent peace, giving it a both new and old title, Military Affairs.

It is not possible to do more here than highlight some of the functions of the many committees of the Association. Any member who has anything in mind that he feels would improve the organization should communicate either directly with the chairman of the proper committee, or, if in doubt as to which committee, to the Secretary of the Association. He may rest assured that any suggestion will receive serious and appreciative consideration.

The official family for 1946-1947 follows:

OFFICERS

C. C. Cody, President, Houston.
B. E. Pickett, Sr., President-Elect, Carrizo Springs.
S. D. Whitten, Vice-President, Greenville.
C. P. Yeager, Vice-President, Corpus Christi.
J. M. Campbell, Vice-President, Goldthwaite.
Holman Taylor, Secretary, Fort Worth (one year).
K. H. Beall, Treasurer, Fort Worth (one year).

BOARD OF TRUSTEES

T. C. Terrell, Chairman, Fort Worth (five years).
E. A. Rowley,[1] Secretary, Amarillo (three years).
J. B. McKnight, Sanatorium (four years).
W. B. Russ, San Antonio (three years).
E. W. Bertner, Houston (one year).

BOARD OF COUNCILORS

First District, Ralph H. Homan, El Paso (three years). Leigh E. Wilcox, El Paso, Vice-Councilor.

Second District, A. H. Fortner, Sweetwater (two years). C. A. Rosebrough, Sweetwater, Vice-Councilor.

Third District, Harvey H. Latson,[2] Amarillo (one year). G. T. Vinyard, Amarillo, Vice-Councilor.

Fourth District, O. N. Mayo, Brownwood, (three years). R. E. Windham, San Angelo, Vice-Councilor.

Fifth District, C. E. Scull, Chairman, San Antonio (one year). W. H. Hargis, San Antonio, Vice-Councilor.

Sixth District, W. E. Whigham,[3] McAllen (one year). J. E. Pilcher, Corpus Christi, Vice-Councilor.

Seventh District, R. T. Wilson, Secretary, Austin

1. Appointed August 1, 1946, to fill the vacancy created by the resignation August 1, 1946, of Dr. S. E. Thompson, Kerrville.
2. Appointed August 1, 1946, to fill the vacancy created by the appointment August 1, 1946, of Dr. E. A. Rowley to the Board of Trustees.
3. Appointed to fill the vacancy created by the death of Dr. J. G. Webb, Mercedes, April 17, 1946.

(two years). J. R. de Steiguer, San Marcos, Vice-Councilor.

Eighth District, F. J. L. Blasingame, Wharton (two years). Harry H. Brown, Jr., Yoakum, Vice-Councilor.

Ninth District, Ghent Graves,[1] Houston (two years). Hatch W. Cummings, Houston, Vice-Councilor.

Tenth District, A. E. Sweatland, Lufkin (two years). William H. Warren, Center, Vice-Councilor.

Eleventh District, J. M. Travis, Jacksonville (three years). C. E. Willingham, Tyler, Vice-Councilor.

Twelfth District, G. V. Brindley, Temple (one year), J. W. David, Corsicana, Vice-Councilor.

Thirteenth District, R. G. Baker, Fort Worth (three years). H. H. Cartwright, Breckenridge, Vice-Councilor.

Fourteenth District, C. C. Nash, Dallas (three years). H. Leslie Moore, Dallas, Vice-Councilor.

Fifteenth District, C. A. Smith, Texarkana (one year). Joe Nichols, Atlanta, Vice-Councilor.

Delegates to A. M. A.

Holman Taylor, Fort Worth (two years).
F. J. L. Blasingame, Wharton (two years).
H. R. Dudgeon, Waco (one year).
B. E. Pickett, Carrizo Springs (one year).
E. H. Cary, Dallas (one year).

Alternates

R. B. Anderson, Fort Worth (two years).
L. H. Reeves, Fort Worth (two years).
E. W. Bertner, Houston (one year).
H. Leslie Moore, Dallas (one year).
A. C. Scott, Temple (one year).

Council on Medical Defense

W. D. Jones, Chairman, Dallas (two years).
Holman Taylor, Secretary (ex-officio), Fort Worth.
L. B. Jackson, San Antonio (four years).
A. P. Howard, Houston (three years).
W. L. Baugh, Lubbock (one year).

Executive Council

Ex-officio, the President (Chairman), and the Secretary (Secretary of the Association), President-Elect, Vice-Presidents, Board of Trustees, Board of Councilors, and the Legislative Committee.

Council on Scientific Work

Ex-officio, the President and Secretary of the Association and Officers of Scientific Sections.
A. C. Scott, Chairman, Temple (two years).
Joseph B. Copeland, San Antonio (five years).
R. B. Alexander, Waco (four years).
J. S. McCelvey, Temple (three years).
Tom G. Glass, Marlin (one year).

Council on Medical Economics

H. E. Griffin, Chairman, Graham (three years).
Tom B. Bond, Fort Worth (five years).
H. R. Dudgeon, Waco (four years).
W. R. McWilliams, Del Rio (two years).
W. F. Starley, Galveston (one year).

Committee on Legislation

J. H. Burleson, Chairman, San Antonio (two years).
C. C. Cody, Jr. (ex-officio), Houston.
Holman Taylor, Secretary (ex-officio), Fort Worth.
L. H. Reeves, Fort Worth (five years).
J. Allen Kyle, Houston (four years).
Z. T. Scott,[2] Austin (three years).
N. D. Buie, Marlin (one year).

1. Appointed May 17, 1946, to fill the vacancy created by the resignation of Dr. J. E. Clarke, Houston.
2. Appointed June 24, 1946, to fill the vacancy created by the resignation of Dr. Joe Gilbert, Austin.

Committee on Collection and Preservation of Records

W. B. Russ, Chairman, San Antonio (one year).
E. W. Bertner, Houston (five years).
A. A. Ross,[1] Lockhart (four years).
Marvin L. Graves, Houston (three years).
John T. Moore, Houston (two years).

Committee on Health Problems in Education

O. M. Marchman, Chairman, Dallas (two years).
Sam N. Key, Austin (five years).
W. S. Barcus, Fort Worth (four years).
C. P. Yeager, Corpus Christi (three years).
Allen C. Hutcheson, Houston (one year).

Committee on Cancer

E. W. Bertner, Chairman, Houston (two years).
David A. Todd, San Antonio (five years).
George T. Caldwell, Dallas (four years).
Frank C. Beall, Fort Worth (three years).
A. A. Ross, Jr., Lockhart (one year).

Council on Postgraduate Medical Education

David W. Carter, Jr., Chairman, Dallas (five years).
Dick P. Wall, Galveston (four years).
A. O. Singleton, Galveston (three years).
Lee Rice, San Antonio (two years).
DeWitt Neighbors, Fort Worth (one year).

Committee on Tuberculosis

C. M. Hendricks, Chairman, El Paso (five years).
Charles J. Koerth, Junction (four years).
David McCullough, Kerrville (three years).
Howard T. Barkley, Houston (two years).
Jesse B. White, Amarillo (one year).

General Arrangements Committee for Annual Session. (All of Dallas).—Frank A. Selecman, Chairman; Edwin L. Rippy, Howard K. Crutcher, John L. Goforth, C. D. Bussey.

Committee on Transportation.—W. E. Vandevere, Chairman, El Paso; Albert T. Cook, Laredo; John R. Martin, Georgetown; J. D. Nichols, Atlanta; Leroy Trice, Palestine.

Committee on Memorial Exercises.—M. D. Levy, Chairman, Houston; Sam E. Thompson, Kerrville; J. J. Crume, Amarillo; Elbert Dunlap, Dallas; J. H. Caton, Eastland.

Committee on Scientific Exhibits.—X. R. Hyde, Chairman, Fort Worth; H. L. Hilgartner, Austin; Arthur Grollman, Dallas; Stuart A. Wallace, Houston; Robert M. Moore, Galveston.

Committee on Medical Education and Hospitals.—Guy F. Witt, Chairman, Dallas; T. H. Fuller, Texarkana; C. T. Stone, Galveston; T. Wade Hedrick, Abilene; W. M. Gambrell, Austin.

Committee on Revision of Constitution and By-Laws.—President C. C. Cody, Chairman, Houston; President-Elect B. E. Pickett, Carrizo Springs; Board of Trustees, E. W. Bertner, Houston; T. C. Terrell, Fort Worth; J. B. McKnight, Sanatorium; E. A. Rowley, Amarillo; W. B. Russ, San Antonio; Secretary Holman Taylor, Fort Worth.

Advisory Committee to the Woman's Auxiliary.—Merton M. Minter, Chairman, Public Relations Committee, Chairman, San Antonio; John H. Burleson, Chairman, Legislative Committee, San Antonio; C. E. Scull, Chairman, Board of Councilors, San Antonio; E. W. Bertner, Acting Chairman, Board of Trustees, Houston; Holman Taylor, Secretary, Fort Worth.

Advisory Board to the Texas Society of Medical Technologists.—S. W. Bohls, Chairman, Austin; J. L. Goforth, Dallas; H. N. Powell, Temple.

Committee on Mental Health.—Charles W. Castner, Chairman, Austin; Arthur J. Schwenkenberg,

1. Appointed August 6, 1946, to fill the vacancy created by the death of Dr. H. W. Cummings, Hearne, July 29, 1946.

Dallas; Titus H. Harris, Galveston; Melbourne J. Cooper, San Antonio; Roy C. Sloan, Terrell.

Committee on Maternal and Child Health.—Allen Stewart, Chairman, Lubbock; Frank Lancaster, Houston; Milton Davison, Marlin; Arild Hansen, Galveston; Robert A. Johnston, Houston; T. J. McElhenney, Austin.

Committee on Venereal Diseases.—Thomas M. Jarmon, Chairman, Tyler; C. F. Lehmann, San Antonio; W. S. Wysong, McKinney; H. B. Allen, Brownwood; S. B. Tucker, Nacogdoches.

Committee on Industrial Health.—H. F. Poyner, Chairman, Houston; Carl A. Nau, Galveston; F. L. Snyder, Fort Worth; L. C. Heare, Port Arthur; Sam C. Arnett, Lubbock.

Committee on Military Affairs.—Holman Taylor, Chairman, Fort Worth; R. B. Anderson, Vice Chairman, Fort Worth; G. F. Thornhill, Austin; E. F. Cadenhead, Brownwood; C. G. Swift, Cameron; J. S. McCelvey, Temple.

Committee on Public Relations.—Merton M. Minter, Chairman, San Antonio; R. A. Miller, San Antonio; Allen Stewart, Lubbock; George Schenewerk, Dallas; J. E. Hogan, Big Spring; R. B. Anderson, Fort Worth, Secretary (ex-officio).

Advisory Council of Past Presidents.—All of the Past Presidents of the State Medical Association.

OFFICERS OF SCIENTIFIC SECTIONS

SECTION ON MEDICINE

James A. Green, Chairman, Houston.
Raymond Gregory, Secretary, Galveston.

SECTION ON SURGERY

Walter G. Stuck, Chairman, San Antonio.
Cornelius Olcott, Secretary, Harlingen.

SECTION ON OBSTETRICS AND GYNECOLOGY

G. H. Beavers, Jr., Chairman, Fort Worth.
N. P. Devereux, Secretary, Dallas.

SECTION ON EYE, EAR, NOSE AND THROAT

R. E. Parrish, Chairman, San Antonio.
Oscar Marchman, Jr., Secretary, Dallas.

SECTION ON RADIOLOGY AND PHYSIOTHERAPY

L. M. Garrett, Chairman, Corpus Christi.
H. E. Whigham, Secretary, McAllen.

SECTION ON PUBLIC HEALTH

Elliott Mendenhall, Chairman, Dallas.
B. M. Primer, Secretary, Austin.

SECTION ON CLINICAL PATHOLOGY

Charles Phillips, Chairman, Temple.
Ellen D. Furey, Secretary, Beaumont.

SECTION ON PEDIATRICS

J. H. Park, Jr., Chairman, Houston.
Howard T. Nesbit, Secretary, Dallas.

The Status of National Health and Medical Legislation at the end of the Seventy-Ninth Congress is difficult to evaluate despite reports from many authoritative sources in Washington, including, first, the Washington office of the Council on Medical Service of the American Medical Association headed by Dr. Joseph S. Lawrence. Dr. Lawrence has done a magnificent job in attempting to keep the medical profession of the United States informed and alerted on all legislation in which it should be interested.

Brief reference will be made here only to the bills in which American medicine was most vitally interested in the Congressional session just concluded.

S. 1050, introduced early in the Seventy-Ninth Congress by Senators Wagner and Murray in the Senate, and H. R. 3293, by Representative Dingell in the House, and its successor, S. 1606 and H. R. 4730, by the same authors, introduced immediately following the announcement of President Truman's cataclysmic national health program, now lie dormant in the committees in which they have long reposed, after extended hearings on the Wagner-Murray-Dingell bill of 1946, which were as ridiculously one-sided in the matter of witnesses allowed to appear as the author-chairman, Senator Murray, could possibly have arranged. In spite of his efforts, however, enough intelligent opposition was heard, and authoritative factual testimony developed through the brilliant interrogations of Senator Donnell, that Senator Murray's committee did not act on the bill before adjournment. It is possible that hearings may be resumed in the fall, and while improbable, President Truman could call a special lame duck session after the November elections, before the new Congress meets in January, 1947, in an effort to rush through some of his favored so-called social security program.

S. 1318, the Maternity and Child Welfare Act, by Senator Pepper, which, if enacted, would have perpetuated the E. M. I. C. war program into peace times, extended its provisions to all classes of the American public, regardless of financial circumstances, and made infants of all persons below 21 years of age, also passed into at least temporary oblivion with the adjournment of the Seventy-Ninth Congress, following what has been referred to as a "quickie" and also one-sided hearing. Only three witnesses were permitted to appear in opposition, a distinguished pediatrician and a distinguished obstetrician representing the American Medical Association, and a representative of the American Dental Association. Others who had pleaded for an opportunity to be heard in opposition were allowed only to submit their statements in writing for the records of the committee. When Senator Pepper realized that a favorable report might not be had from the committee, strategy was quickly changed and S. J. R. 177 was offered by the committee as a substitute for S. 1318. The purport of the resolution was to increase the appropriation for the Children's Bureau about threefold for the next year without extending its functions or activities. The increases provided were (1) from $5,000,000 to $15,000,000 for the promotion of health of mothers and children; (2) from $3,870,000 to $10,000,000 for the care of crippled children; (3) from $1,510,000 to $5,000,000 for

child welfare services; and (4) $1,500,000 for administrative purposes.

The Senate Finance Committee, to which S. J. R. 177 was referred, did not act upon it. However, when H. R. 7037, Social Security Act Amendments of 1946, was before the Senate, it was amended by adding provisions for increasing the appropriation to the Children's Bureau for maternal and child welfare, crippled children, and dependent children activities in accordance with the provisions of S. J. R. 177. In conference the House committee insisted upon a reduction of the total amount to $14,525,000. This reduction was accepted by both houses and H. R. 7037 has been signed by the President. While the appropriation was increased there was no change in the law. As cryptically stated by one analyst, "the Children's Bureau has more money but no more power."

Again it is possible in the event of a lame duck session, or even without such session, for a revival of the Pepper bill in the form of additional hearings, and it is difficult to believe that, regardless of these eventualities, Senator Pepper will fail to introduce into the new Congress legislation very similar to that embodied in S. 1318 of the Seventy-Ninth session.

Whatever happens in regard to the two bills discussed, or similar legislation, the State Medical Association of Texas will again insist upon being heard, and witnesses have already been appointed to represent the Association at Washington if necessary.

S. 1850, the bill providing for a National Research Foundation, in which the medical profession was naturally interested, died in committee.

The only two bills originating in the Seventy-Ninth Congress, enacted into law that were of special interest to the medical profession were S. 191, the Hill-Burton bill, Hospital Construction Act, now Public Law 725, and H. R. 4512, providing for a National Neuropsychiatric Institute, now Public Law 487. The former bill, which received the support of the American Medical Association and the State Medical Association of Texas, is discussed elsewhere in these columns (p. 305). The bill providing for a National Neuropsychiatric Institute became a law with little if any consideration by the official groups of medicine, perhaps because their hands were so full in other directions with legislation of far more serious import as far as the public health is concerned.

Again it may be said that while American medicine is being given a breathing spell with the adjournment of the Seventy-Ninth Congress, even though there may be no lame duck session or further hearings on the Wagner-Murray-Dingell bill in 1946, we may be certain that those who want to change the way of American life to a more socialistic pattern are even now planning their strategy for the 1947 Congress. From all reports received, Texas will again be represented in Congress in 1947 by a delegation opposed to such changes in general and to changes in the practice of medicine in particular. That, at least, is reassuring.

The Hill-Burton Bill (S. 191), commonly known as the Hospital Construction Bill, passed by the Seventy-Ninth Congress, became Public Law 725 on August 13, 1946, on which date it was signed by President Truman. This measure was approved by the American Medical Association and the State Medical Association of Texas. The provisions of the bill were discussed in the November, 1945, JOURNAL. They were referred to again in the December, 1945, issue, in connection with an editorial announcement of the Advisory Council to the State Board of Health, the official agency in Texas now conducting a survey of the state to determine what hospital construction is needed, where it is needed, and whether communities can support such facilities if and when they are constructed. The same agency will also determine where public health units are needed and where they can be expected to be properly supported locally. This survey was discussed fully again in these columns in the March, 1946, JOURNAL (page 559).

Dr. Victor Johnson, secretary of the Council on Medical Education and Hospitals of the American Medical Association, who represented American medicine in hearings on the bill in Congress, voiced the following caution regarding the measure, in an address recently to the graduates of the University of Oklahoma School of Medicine, prior to its enactment into law:

"Because the program is experimental in nature, because the needs can be determined only by scientific surveys, the funds allotted should be reasonably restricted to prevent a vast program of construction of hospitals which are not needed or cannot be maintained. A major effort in this program must be exerted in the direction of inhibition. Already we have encountered an avalanche of local demands for new hospitals, dictated as often by local pride as by real need. There is a tendency for every community to think it should have its own small hospital, with complete disregard for the fact that three nearby communities would be better served by one hospital of 150 beds than by three separate hospitals of fifty beds, as is also true of schools, for example."

The U. S. Public Health Service announced recently the creation of a Division of Hospital Facilities to assist Surgeon General Thomas Parran in carrying out the provisions of the Hospital Survey and Construc-

tion Act. According to a release dated August 20, 1946, "This will include assistance to the States, their political subdivisions, and non-profit organizations in matters relating to the study, construction and operation of hospitals. The Division will also assist the Surgeon General in preparing regulations, determining allotments and grants and considering applications, plans and projects."

Dr. George W. Cox, State Health Officer, to whom responsibility for the survey in Texas has been delegated by the State Board of Health, received a communication on this subject under date of August 27, 1946, from the Senior Surgeon of the U. S. Public Health Service in charge of the district office for Texas. It is published here in full because of the information it contains, and because of the great interest of the medical profession in the program. The letter follows:

"This office is in receipt of further comments on the passage of the Hospital Survey and Construction Act. On August 13, 1946, President Truman signed this measure, known prior to enactment as S. 191, the Hill-Burton Bill, now Public Law 725, 79th Congress. As soon as printed copies are available, copies will be forwarded to you, as well as copies of House Report Number 2519 of July 13, 1946.

"The Surgeon General is sending letters to all the Governors on this matter. This correspondence has been directed to the Governors, inasmuch as the Hospital Survey and Construction Act, with respect to both the survey and planning and the construction phases of the program, leaves up to the State the designation of the State Agency to carry the administrative responsibility. On the basis of $3,000,000.00 appropriation for survey and planning and $75,000,000.00 for construction (over a 5 year period), the allotment for Texas is listed for survey and planning, $145,051.00, and construction $4,842,075.00, which automatically becomes available upon the Surgeon General's approval of the State application under Part B of the Act. The Governor has been or will be notified of the amounts of the allotments. The actual amount available, of course, will be dependent upon the actual appropriation made by Congress.

"Standard application forms on which the State of Texas may request Federal funds for survey and planning are now being processed. These are to be released through the District Office. It appears to be the policy of the Division of Hospital Facilities to permit consideration of State requests for Federal funds for survey and planning only when made on these Federal forms and consideration in Washington only when accompanied by the District Office recommendation. This office is informed that when these forms and instructions are ready they will be made available through this office to forward to you. It is also our understanding that the Governor will be notified of their availability.

"An attempt will be made by this office to follow a uniform policy to discourage premature direct inquiries from communities desiring construction funds. This policy is substantiated by the requirements of the law which state that before the Surgeon General can consider any request for Federal funds, for a construction project, there must be a State plan approved by the Surgeon General; that the State Agency, following the Surgeon General's approval of the State plan, must have recommended the construction application for approval; and that there must have been made the submittals and assurances of the availability from non-Federal sources of two-thirds of construction costs and all costs of hospital maintenance and operation. The Surgeon General has requested the coöperation of the Governors in highlighting these points in any State publicity given the program.

"The first deficiency bill of 1947, which has been approved by the President, contains an appropriation of $2,350,000 to carry out the provisions of Title 6 of the Public Health Service Act as amended, for assistance to the States and for administrative expenses of the Public Health Service in connection with the program. It is anticipated that $1,500,000 will be allocated immediately to the States for conducting surveys and developing plans, as required by the Act. No funds for construction purposes were appropriated by the last Congress.

"This office will endeavor to keep you advised of developments by correspondence."

As has been stated in previous editorial discussions of this subject and program, the State Medical Association has been vitally interested in the matter from the beginning. Fortunately the Association is repesented on the Advisory Council to the State Board of Health, in connection with the survey and construction program, in the persons of the President, Secretary, Chairman of the Board of Trustees, Chairman of the Board of Councilors, Chairman of the Legislative Committee, Chairman of the Council on Medical Economics, and Chairman of the Public Relations Committee. At least these were the officials appointed during the past year by Governor Stevenson on the request of our Legislative Committee, and it is anticipated that changes will be made on the Council as changes take place in the above offices, provided the Governor is agreeable to making the new appointments.

In addition to this representation the State Medical Association is now busily conducting a survey on its own of hospital and medical service facilities in Texas, accumulating its material from the 124 county medical societies in Texas. The Council on Medical Economics and the Committee on Medical Education and Hospitals will study and evaluate these data, which will be of very great value to official representatives of the Association on the Advisory Council to the Board of Health when the survey of that body is completed and the time comes for recommendations as to where hospital and public health facility construction is needed and where it can and will be supported locally.

American medicine is faced with one of its greatest challenges for leadership in matters pertaining to public health as a result of the passage of the Hill-Burton bill. It will accept and meet that challenge as faithfully as it has discharged every public obligation pertaining to medical affairs in its long and

glorious history that has given to the American people the finest medical care of any people in the world today. Facts and figures fully support that statement.

Finally, it is recommended that requests for information regarding this matter be addressed to Dr. George W. Cox, State Health Department, Austin 2, Texas. It is not likely that the survey will be finished for several months, and no state plan or recommendations concerning hospital construction can be made until it is finished. Actual construction can be authorized then only after the plan has been approved by the Surgeon General of the U. S. Public Health Service. Dr. Cox will, however, have the latest available information on the subject.

New Films for the Motion Picture Library.—Announcement is made here of the recent acquisition of five motion picture films on medical subjects which are now available for lending to county medical societies, physicians, and other interested persons. Two of the five recently acquired films are on subjects for professional audiences only, and three are for lay audiences. The Motion Picture Film Library now contains thirty-three films suitable for lay audiences and forty-six appropriate for professional (medical) audiences only. Program chairmen of county medical societies who do not have lists of the films available in the Library, with descriptions of each, should by all means request them. All of the films are 16 mm. Some are silent and some are sound; some in black and white and some in color. They cover a wide range of subjects.

The three films for lay audiences, acquisition of which is announced here, were made available to the Library on a long term loan basis by the Texas Tuberculosis Association, Austin, and Standard Brands, Inc., Dallas. Grateful appreciation to these organizations is expressed for their fine contributions to the Library for the use of physicians and others interested in health education.

Descriptions of the five films referred to follow:

Aids in Muscle Training. 16 mm., silent, showing time, 12 minutes. This film was prepared by the Council on Physical Therapy of the American Medical Association, Chicago. It gives a demonstration of sling suspension exercises for the upper and lower extremities, and three kinds of "walkers" for reëducation exercises. It is suitable for professional audiences.

Golden Glory. 16 mm., sound, showing time, 31 minutes. (Available through the courtesy of Standard Brands, Inc., Dallas.) This film is keyed to the interests of the National Nutrition Program, and contains no commercialism or advertising. It is produced for showing to general assembly groups in colleges, high schools, and elementary schools, or to any lay group interested in good health. It stresses the importance of eating, as far as possible, something from each of the Basic Food Groups each day. In bringing out its lesson, it tells the story of Mark Carleton, who was mainly responsible for America's abundance of one of our most vital foods —wheat. It points out that pioneers and scientists have made fine foods available to us, and that the science of nutrition can tell us how to use them. But it is solely up to each person to keep himself fit by eating properly of the right foods.

Modest Miracle. 16 mm., sound, showing time, 20 minutes. (Available through the courtesy of Standard Brands, Inc., Dallas.) This film is suitable for lay audiences, and it tells the story behind the discovery of Vitamin B_1 and its importance to health.

TB, This Is. 16 mm., sound, showing time, 10 minutes. (Available through the courtesy of the Texas Tuberculosis Association, Austin.) This film outlines the cause, spread, cure, and prevention of tuberculosis, with the clarity and pace of an up-to-the-minute factual newsreel. It is a forthright presentation of the problem and what remains to be done about it, and is designed to meet the demand for a brief teaching film to give the layman correct information on tuberculosis, but in easily understood and arresting form.

Underwater Therapy. 16 mm., silent, showing time, 16 minutes. This film was prepared by the Council on Physical Therapy of the American Medical Association, Chicago, and is a presentation of therapeutic use of large and small exercise pools, Hubbard tanks, and home-made tanks, and demonstration of types of exercises given in cases such as infantile paralysis, cerebral palsy, and postoperative congenital dislocation of the hip. It is suitable for professional audiences.

University of Texas Postgraduate Program.—The 1946-1947 schedule of postgraduate courses at the University of Texas Medical Branch has been announced by Dr. George M. Decherd, Jr., director of the Postgraduate Division. Members of the University staff and outstanding speakers from throughout the nation will teach.

Two new types of courses have been included in the plans for the coming year. A week-long review of the fundamental medical sciences in preclinical fields with particular reference to their application to clinical medicine will begin next February, and tumor conferences will be held on one Saturday every three months. The tumor conferences will cover various types of neoplastic diseases, utilizing available clinical material, but half of each conference will be devoted to an intensive study of a particular group of tumors, such as lung or breast tumors, under the direction of an authority in that specific field.

The first of the special courses, the Fourth Postgraduate Conference in Pediatrics, to be held the week of October 28 to November 2, will be offered in cooperation with the University of Texas Child Health Program and the Division of Maternal and Child Health of the State Health Department. An allowance for the $25 tuition, travel, and a daily stipend has been made available by the State Health Department for Texas physi-

cians who are accepted for the course, preference being given in the following order: (1) physicians recently discharged from military service, (2) general practitioners interested in pediatrics, (3) physicians associated with health units, and (4) pediatricians and other specialists interested in the childhood age period. About eighty physicians can be accommodated.

The pediatrics conference will deal with the problem of diarrhea in infants, endocrine disorders in children, infant feeding, the premature infant, neurological problems in childhood, virus diseases, acute contagious diseases of childhood, convalescent care, abdominal pain in children, pyloric stenosis and pyloric spasm, and splenomegaly as a diagnostic problem. Six outstanding physicians will be guest speakers.

Applications to attend the pediatrics conference may be obtained from Dr. Arild E. Hansen, Chairman, Department of Pediatrics, University of Texas School of Medicine, Galveston.

In addition to the refresher courses outlined below, residencies in various specialties, preclinical work preparatory to board examinations, externships, and specially arranged studies are being offered by the University. Dr. Decherd again extends a welcome to visitors to the various classes, clinics, conferences, and seminars, and offers the cooperation of his staff in supplying speakers for medical meetings upon request.

The tentative schedule of refresher courses for 1946-1947 follows:

Pediatrics, October 28-November 2.
Surgery, November 18-23.
Tumor Conference, December 14.
Internal Medicine, February 3-8.
Fundamental Medical Sciences, February 24-March 1.
Tumor Conference, March 8.
Obstetrics, March 10-15.
Physical Medicine, March 3-7.
Pediatrics, March 31-April 5.
Tumor Conference, June 14.
Tumor Conference, September 13.

Dr. S. E. Thompson Resigned from membership on the Board of Trustees on August 1, 1946, and was succeeded in office on that date by Dr. E. A. Rowley, of Amarillo, Councilor of the Third District of the Association, on the appointment of President Dr. C. C. Cody.

Dr. Thompson was elected a Trustee of the Association by the House of Delegates in 1939, filling a vacancy on the Board caused by the death of Dr. John W. Burns, of Cuero. In 1940, Dr. Thompson became Chairman of the Board, continuing in that office until his resignation was regretfully accepted by the President.

No effort will be made here to pay tribute to the outstanding services rendered by Dr. Thompson during his illustrious official career with the State Medical Association, which he also served as President in 1934-1935. But it would be ill fitting, indeed, not to call attention to the retirement of an officer of the Association whose leadership has no peer in its history and which was exercised during a most turbulent and difficult period. Dr. Thompson's greatest value as a leader lay in his ability to keep the respect of opposing elements on all controversial matters. Both sides invariably sought his advice and accepted it. Because of this he was able to compose differences and direct action always to the good of the Association.

Dr. Thompson's leadership fortunately will not be lost in his official retirement. His counsel will continue to be sought by those who are in authority in the Association as long as Dr. Thompson is available for such consultation, which, it is hoped, will be for many years.

Dr. E. A. Rowley, who succeeds Dr. Thompson on the Board, has rendered exceptionally fine service to the Association as Councilor of the Third District since 1939. He is particularly well known for his services as a member of the Committee on Medical Licensure and as one of the leaders in the movement for basic science legislation in Texas, in which matter the Association is greatly interested at the present time. Dr. Rowley is sound, sane, and practical. President Cody is to be commended for his appointment.

Dr. H. H. Latson, of Amarillo, who was appointed by President Dr. Cody to succeed Dr. Rowley as Councilor of the Third District, comes to the Board of Councilors highly recommended by all who know him as an interested, well informed, and dynamic leader.

CURRENT EDITORIAL COMMENT*

Migraine and its Association to Allergy.—Migraine is a term which has been used to designate paroxysmal severe headaches which are frequently preceded by visual disturbances and associated with nausea and vomiting. Recently there has been too great a tendency to associate this type of headache with some form of allergy without adequate medical study and observation.

In reality this type of headache constitutes a symptom which should entail more general consideration of the patient as a medical problem.

Wolff, Ray, and others have made inter-

*This department of the JOURNAL presents editorial comments on current items pertaining to the science, art and practice of medicine, contributed by members of the State Medical Association and scientists closely associated with the medical profession of Texas. Invitation is hereby extended to any member of the State Medical Association of Texas to submit such discussions for this department. The discussions should not be more than 500 words in length.

esting studies and contributions concerning the mechanism of pain and migraine. They have demonstrated increased amplitude of oscillation of arteries during an attack of migraine and have shown a subsequent decreased amplitude of oscillation following the administration of ergotamine. From this it would appear that the location and severity of the pain would depend on the vessels involved and the degree of oscillation increase. Undoubtedly there are coexisting vascular changes in the smaller vessels and to some extent changes in fluid exchange and water balance; such changes have been described. Other types of cephalalgia probably have a similar method of pain production—histamine cephalgeas and Meniere's syndrome. Miles Atchison has demonstrated a relationship between Meniere's syndrome and migraine.

The mechanism of allergic reactions is largely based on vasomotor changes but has not been so definitely concerned with the amplitude of vascular oscillation. Undoubtedly allergy plays a part in production of migraine and a small percentage of such headaches can be proven on the basis of a food sensitivity, but it seems more reasonable to assume that the patient with migraine has an inherently vulnerable vasomotor mechanism which may be excited by a variety of causes—a so-called trigger mechanism. This is, of course, true in many known allergic conditions.

In the study of a patient with migraine one should be concerned with the situation as a difficult diagnostic problem, giving consideration to any abnormality elicited from a careful history and examination. Certainly the presence of organic neurological lesions should be ruled out. Then there should be a careful evaluation of other possibilities, including other existing organic disease, psychogenic factors, malnutrition, anemia, and endocrine imbalance. The importance of the psychogenic factor has been repeatedly demonstrated in handling these cases, and in many instances the physician who handles well the psychoneurotics, now recognized as one having a good concept of psychosomatic medicine, will probably handle migraine cases more successfully than any one else.

An allergic investigation is simply one of several procedures in the study of the patient with migraine.

Skin testing and trial or elimination diets must be considered. For such a study skin testing falls far short of being adequate, and when it fails, elimination diets must be resorted to before dismissing the possibility of food allergy.

For symptomatic relief the use of narcotics should be restricted—certainly if there is a tendency toward increasing frequency of attacks.

Consideration should be given to making ergotrate effective. It may not relieve when given by mouth or intramuscularly and may give a dramatic result if given intravenously.

Some rather good results have been reported by Miles Atchison, who determines the patient's histamine sensitivity by skin test. Those showing a strongly positive reaction are treated with histamine and those showing minimal reaction are treated with nicotinic acid (not the amide, the vasodilatory action of nicotinic acid is necessary).

The Mayo group has reported good results in treating the so-called histamine encephalalgia with histamine. The mechanism of pain in this type of headache is undoubtedly similar to pain in migraine.

It should be realized that such measures sometimes give rather lasting symptomatic relief and after other attempts have failed these measures are certainly justified; however, the fact remains that the important, truly scientific approach is the consideration of the patient as a diagnostic problem in internal medicine.

CHARLES B. SHUEY, M. D.
Department of Medicine, Southwestern Medical College, Dallas, Texas.

INFECTED MICE HARBOR MENINGEAL DISEASE

The common house mouse, long believed to be a constant source of infection, was responsible for the illness of four persons in the same community who had a rare but mild disease known as choriomeningitis, according to three investigators writing in the May 4 issue of *The Journal of the American Medical Association.*

Gilbert Dalldorf, M. D., from the Division of Laboratories and Research, New York State Department of Health, Albany; C. W. Jungeblut, M. D., from the Department of Bacteriology, Columbia University College of Physicians and Surgeons, New York; and Margaret Douglass Umphlet, B. S., M. A., of Raleigh, N. C., say that "many house mice trapped in the homes of choriomeningitis patients are virus carriers and infection in experimental mouse colonies may persist indefinitely, being transmitted from one generation to the next. These observations suggest that a building harboring infected mice could be a persistent source of human disease."

The authors report 3 cases of choriomeningitis which developed among the residents of a multiple family dwelling in a North Carolina community, and a fourth case in a near neighbor. Two mice trapped in this building were found to be carriers of the virus causing this disease.

Choriomeningitis is marked by infection of the upper respiratory tract with symptoms of irritation of the meninges, or lining of the spinal cord, such as fever, headache and stiff neck. The disease lasts from ten days to two weeks, and recovery is almost certain.

DIAGNOSIS OF LIVER ABSCESS BY MEANS OF THOROTRAST HEPATOSPLENOGRAPHY

ROBERT J. REEVES, M. D.

and

KARL A. YOUNGSTROM, M. D.*

DURHAM, N. C.

Much has been written on the subject of hepatic abscess, but the importance of early diagnosis and treatment should be ever kept in mind. Ochsner[3] has very thoroughly reviewed the literature in his studies of amebic infection and liver abscess. The occurrence of liver abscess is becoming more prevalent and the early diagnosis by all possible methods cannot be stressed too much. The majority of hepatic abscesses are due to Endamoeba histolytica and since millions of our military personnel have been engaged in regions geographically and hygienically favorable to the maintenance of amebiasis, there is an obvious probability of a greatly increased incidence of amebic infection in this country. Figures on the incidence of amebiasis in the United States reveal no predilection for tropical and subtropical regions. Craig[1] stated that at least 13,000,000 people in the United States harbor the pathogenic intestinal protozoa. He said the highest incidence of liver abscess is found in amebiasis. He reported 84 per cent post mortem cases showing abscess. Amebic abscess of the liver was found on numerous occasions in which it was totally unsuspected before death.

The pathogenesis of liver abscess is well known. The infection is predominantly in the male sex. It is a condition of adult life, between 20 and 50 years of age. In our series only 3 cases out of 39 were female.

ETIOLOGY OF LIVER ABSCESS—OCHSNER

1. Transportation of virulent organism through the portal vein from areas drained by the portal system.
   a. Appendix.
   b. Rectum.
   c. Other portions of the bowel.
2. Extension from contiguous diseased processes.
   a. Cholecystitis and cholangitis.
   b. Gastric and duodenal ulceration.
   c. Subphrenic space infection.
3. Trauma.
   a. Penetrating injuries with introduction of microorganisms from without.
   b. Subcutaneous injuries producing devitalization of liver tissue permitting growth of microorganisms already present in the liver.
4. Blood borne infections with the production of metastatic abscesses, the microorganisms being transported through the hepatic arteries.
5. Amebic infection. This is the more common infection.

PATHOLOGIC MANIFESTATIONS

There is considerable variation in the gross appearance of the liver in amebic abscess depending on the location and the degree and stage of development. Usually the liver is enlarged, although if the abscess is small and deeply situated, it may have a fairly normal external appearance. If the abscess lies near the capsule, there is usually localized peritonitis with fibrinous exudation present on the surface. If the abscess is located in the dome of the liver, there are adhesions to the diaphragm and a bulging upward. Many of these cases go undiagnosed until there is a rupture through the diaphragm. The large chronic abscesses have a hard, dense fibrous shell, and it is frequently extremely difficult to demonstrate the amebae. In our series of 14 cases diagnosed amebic abscess, the organism was demonstrated in only 6. In 1 case the organisms were almost missed at autopsy, which is certainly a significant commentary on the difficulty of obtaining this important proof of the diagnosis.

DIAGNOSIS

The diagnosis of liver abscess, pyogenic or amebic, is not difficult if the conditions are kept in mind and clinical manifestations and laboratory examinations accorded due consideration. Amebic abscess should always be considered in a patient presenting a low grade daily remittent or intermittent fever, pain, and tenderness over the liver area. In many cases there is little or no jaundice. Chills and fever are more common in the pyogenic abscess. Repeated stool examinations should be made in the search for Endamoeba histolytica.

Differential diagnosis includes the cysts, metastatic tumor nodules, and the primary tumors, such as:

1. Hepatomas.
   a. Liver cell adenomas.
   b. Liver cell carcinomas with or without cirrhosis.
2. Cholangiomas.
   a. Carcinomas.
   b. Adenomas of intrahepatic bile ducts, solid or cystic.

From the Department of Radiology, Duke University College of Medicine.

Read before the General Meeting, State Medical Association of Texas, Annual Session, Galveston, May 9, 1946.

*At present in the armed services.

3. Cholangiohepatomas of both liver cell and duct elements.

4. Tumors primary in the liver but not of specific hepatic elements (vascular, fibrous, adrenal rests, and so forth).

Many of these cases are diagnosed by the surgeon but in addition to the clinical picture the characteristic fluoroscopic and roentgenologic observations must be evaluated. The liver is observed to be enlarged, the diaphragm elevated, and occasionally subdiaphragmatic or supradiaphragmatic extension is noted. Frequently the abscess is central and in the early stage may show no marked enlargement.

we have been unable to find any proof that the low grade radioactivity has produced liver damage or been a cause of death.

Thorotrast hepatosplenography should be reserved for patients where a real and useful diagnostic response can be expected. Undoubtedly the tissues react to the impregnation of thorium with changes which may in part be irreversible, but to the present time no clinical observations have been presented which allow acceptance of a veritable damaging action by thorium dioxide on the healthy organism or during the course of any disease.

FIG. 1a. CASE 1. Large abscess cavity involving upper half of the liver.

FIG. 1b. CASE 1. Appearance of the liver six years after injection of thorotrast. Most of the thorium has left the liver.

In this latter group the use of thorium dioxide is a most valuable aid in localization. In a former report,[6] in 1937, we discussed radioactivity of thorium, but there have been many reports on the use of this drug and pathological studies have failed to show any liver damage.[8] There is slow excretion and it is not known just when the drug is finally eliminated. Two of our cases showed disappearance of thorium by roentgen-ray in five and seven years, with no evidence of radioactivity recorded on the Geiger counter.

The use of thorotrast as a diagnostic procedure was discussed in a previous report,[5] but during recent years there has been neglect in the use of this method. The dangers in the use of thorium dioxide and its rate of elimination from the liver have been carefully studied.[4, 7] To this date, fourteen years after treating some of these patients,

Yater,[9] in 1944, gave the most recent report on the use of thorotrast.

The technique of injection of thorotrast is very simple. The average dosage is 75 cc. colloidol thorium dioxide mixed with several hundred cubic centimeters of isotonic solution of sodium chloride. It is injected slowly over a thirty minute period. The reaction, if any, is very mild. In making the injection it is important to avoid infiltration in the subcutaneous tissues. The thorium is not absorbed and produces a hard painful mass. The immediate presence of thorium is noted in the liver several hours after injection. A roentgenogram taken a few hours after injection often shows sufficient contrast to outline a cavity or mass. Yater[9] stated he has been able to detect contrast fifteen minutes after injection. The concentration in the reticuloendothelial cells continues over several

weeks and the liver density increases. Since a liver abscess or tumor is devoid of active reticuloendothelial cells, it will contain none of the thorium dioxide and will be of lesser density than surrounding normal liver tissue. In this manner the abscess may be easily demonstrated and accurately localized.

In our series, amebic abscess was found to be the most common cause of liver abscess. Twenty cases of the series of 39 were thought to have amebic infection. There were 35 males and only 4 females. There were 2 patients under 21 years of age, being 15 and 17 years, respectively. The oldest was a man of 70 years.

CASE 2.—E. L., a white saw mill worker, age 35, was admitted to the Medical Service November 19, 1936, complaining of diarrhea for two months.

His past health had been fairly good except for typhoid fever at the age of 15. Since that time he had had episodes of summer diarrhea occurring every year or two. The stools at times had been bloody. No amebae were ever found.

His present illness was accompanied by a severe, bloody diarrhea which was intermittent and persisted to the time of his hospital visit. He had had no chills but felt hot at frequent intervals.

Laboratory studies revealed the white blood cell count as 17,000 with 82 per cent polymorphonuclears and 1 per cent eosinophiles. In one stool examination there were cyst-like forms which suggested amebae.

Proctoscopic study revealed small discrete ulcers but no amebae were found. Amebic infection was

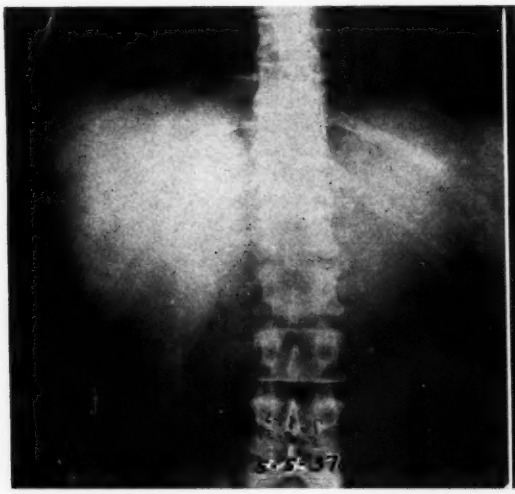


FIG. 2*a*. CASE 2. Liver appearance two weeks after injection of thorotrast. No cavity could be seen.

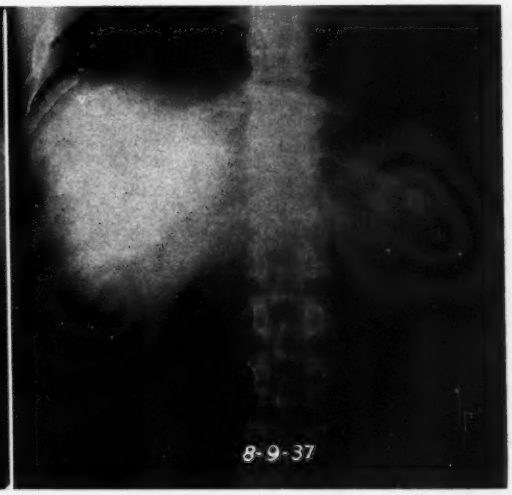


FIG. 2*b*. CASE 2. Liver now almost normal in size. There has been more concentration of thorium.

The following case histories serve to show the importance of localization of the abscess.

CASE REPORTS

CASE 1.—B. D., a white man, age 51, was admitted to the Medical Service complaining of pain below the right costal margin and diarrhea of seven weeks duration. Five years before admission, the patient began having bimonthly attacks of diarrhea and occasionally blood and mucus streaked stools. These attacks were mild and produced no great discomfort. Seven weeks prior to entry, the pain became severe and the diarrhea became worse. Stool examinations disclosed many motile ameba. A roentgenogram of the chest revealed a highly elevated right diaphragm and enlarged liver. These observations suggested liver abscess and a solution of 72 cc. of thorotrast was given intravenously. Roentgenograms disclosed a large abscess cavity, measuring 14 cm. in diameter (fig. 1*a*). The cavity was aspirated and 1,500 cc. of thick yellow pus was obtained. No organisms could be cultured.

The patient was placed on anti-amebic regime and appeared well until his death from heart disease six years later. A roentgenogram six years after initial thorotrast study showed most of the thorium had left the liver (fig. 1*b*).

suspected, however, and the patient was given emetine hydrochloride, 64 mg. daily for six days. He improved rapidly following this treatment. The liver was found to be considerably enlarged. The clinician advised against thorotrast hepatosplenography and the patient was discharged.

He was readmitted April 14, 1937, with a history of chills and fever. He had been diagnosed as having malaria by his local physician and received treatment without relief. At this admission the temperature was spiking in character. The liver was moderately enlarged. He was again given emetine, 64 mg. daily for six days, and symptoms cleared up rapidly.

On May 19, he was given 75 cc. of thorotrast intravenously and a large liver was visualized (fig. 2). No abscess cavity could be found and exploratory surgery was not advised. After 25 mg. of carbazone, twice daily, was prescribed, he was discharged. When seen two years later he had had no further symptoms and appeared to be in good health.

CASE 3.—C. A., a white man, aged 37, was admitted to Duke Hospital February 21, 1945, complaining of chills and fever of five months duration.

The patient had been well except for a three

months episode of bloody diarrhea three years previously, which was diagnosed as amebic dysentery. He had received twelve intramuscular injections of some preparation and his symptoms had cleared up until October, 1944, when he began an intermittent fever and daily chills. He was thought to have malaria and was treated without relief. The temperature spiked at times to 104 F. An exploratory laparotomy at another hospital disclosed nothing abnormal. He was thought to have a kidney infection at that time.

Upon admission to Duke Hospital, his temperature was 101 F. The white blood count was 15,500. All other laboratory tests were negative. Roentgenograms of the chest and abdomen showed elevation of the right diaphragm and the liver margin was low. He was thought to have a liver abscess and was given emetine hydrochloride, 30 mg. hypodermically, for ten days. After his third hospital day he was afebrile and he was discharged to the outpatient clinic.

He was readmitted eight months later, October, 1945, with a similar story of recurrence of the chills and fever. His liver did not appear as large as at the former admission. He was given penicillin, 20,000 units every three hours, but the temperature continued spiking in character. On his thirteenth hospital day emetine, 30 mg. twice daily, was prescribed. His temperature returned to normal within six days and remained normal during his hospital stay. He was discharged but readmitted two weeks later with a recurrence of his former symptoms. At this time he was given 75 cc. of thorotrast intravenously. A roentgen film of the abdomen two days after giving thorium disclosed a large, 10 cm. abscess cavity in the upper, posterior portion of the liver (fig. 3*a*). This was given surgical drainage and thick, chocolate colored pus was obtained. All cultures were negative. His symptoms cleared rapidly and he was discharged to the outpatient clinic. A physical examination March 15, 1946, showed no evidence of infection. A roentgenogram of the liver region failed to show the abscess cavity and the liver had returned to normal size (fig. 3*b*). A study of the liver for radioactivity showed a count of fifteen on the Geiger counter, which is only slightly above normal.

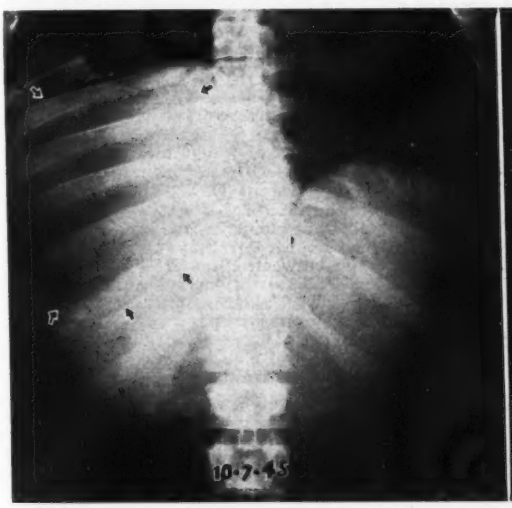


FIG. 3*a*. CASE 3. After thorium injection of the liver, visualizing large liver abscess.

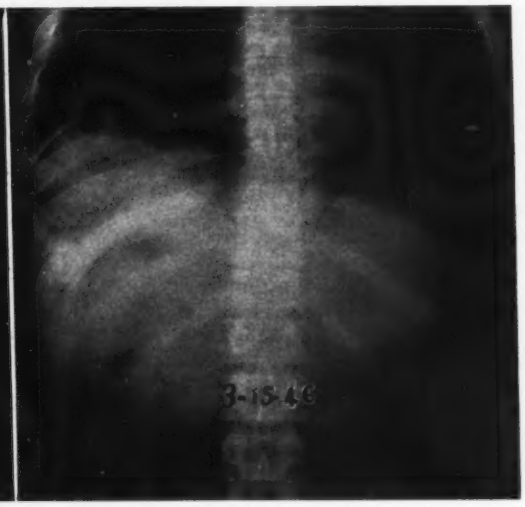


FIG. 3*b*. CASE 3. Follow-up study showing normal size liver and retention of thorium.

SUMMARY

The usefulness of hepatosplenography resides in the reliable demonstration of the size of the liver and spleen, and their internal architecture. In this way it is possible to solve important diagnostic therapeutic problems such as the presence or absence of abscess, cirrhosis, or tumor, and often to differentiate between these. One may also follow the progress of healing of a cavity or tumor metastasis under treatment. There is apparently no more reliable laboratory method short of operation to differentiate between carcinoma and cirrhosis in an enlarged liver. It is no small comfort to a surgeon to know the exact location of a liver abscess, its size, and relations, before drainage is attempted.

Pyogenic abscess is primarily a complication of an intra-abdominal suppurative process with the causative organism in the portal area. Of these lesions appendicitis is the most frequent. The most frequently found organisms in the pyogenic hepatic abscesses are B. coli, and Staphylococci. Amebic abscess is the most common cause of liver abscess in our study.

REFERENCES

1. Craig, C. F., and Faust, E. C.: Clinical Parasitology, ed. 2, Philadelphia, Lea and Febiger, 1940.
2. McCarty, R. B., and Schnedorf, J. G.: Conservative Treatment of Chronic Amebic Lung Abscess, Complicated by Rupture and Intraperitoneal Abscess, Am. J. Surg. 71:401-405 (Mar.) 1946.
3. Ochsner, A., and DeBakey, M.: Amebic Hepatitis and Hepatic Abscess, Surgery 13:460-493 (Mar.); 612-649 (Apr.) 1943.
4. Reeves, R. J.: Use of Thorium Dioxide in Roentgeno-

graphic Study of Liver Abscess, Am. J. Roentgenol. 36:923-927 (Dec.) 1936.
5. Reeves, R. J., and Apple, E. D.: Use of Thorium Dioxide in Diagnosis of Liver Abscess, J. A. M. A. 100:1682-1683 (May 27) 1933.
6. Reeves, R. J., and Morgan, J. E.: Retention of Thorium Dioxide by Reticulo-Endothelial System, Radiology 29:612-614 (Nov.) 1937.
7. Stenstrom, W.: Elimination of Radioactive Elements by Patients and Rabbits after Injection of Thorotrast, Radiology 37:698-704 (Dec.) 1941.
8. Taft, R. B.: Demonstration of Gamma Radiation from Living Patient Following Thorotrast Injection, Radiology 29: 530-534 (Nov.) 1937.
9. Yater, W. M.: Diagnosis of Liver Abscess by Means of Thorotrast Hepatosplenography, J. A. M. A. 125:775-778 (July 15) 1944.

PARA-AMINOBENZOIC ACID IN THE TREATMENT OF ENDEMIC TYPHUS FEVER

MOISE D. LEVY, M. D.*, AND
W. T. ARNOLD, M. D.†
HOUSTON, TEXAS

Experimental investigations[1, 4, 7] have shown that para-aminobenzoic acid inhibits the growth of the rickettsiae responsible for typhus and Rocky Mountain spotted fever. The successful use of para-aminobenzoic acid has been reported in an epidemic of louse borne typhus fever,[8] and recently a case of Rocky Mountain spotted fever[6] was reported cured by the use of this drug.

Typhus fever of the murine type has been known to be endemic in Texas since 1916,[5] and since 1939[3] the case incidence has increased from 5 cases per hundred thousand to 30 cases per hundred thousand in 1945.[2]

The following report of 6 cases of endemic typhus fever of the murine type treated with para-aminobenzoic acid is so far as we know the first such report made.

CASE REPORTS

CASE 1.—A. W. Z., a white man aged 43, was admitted to the hospital on March 5, 1945, complaining of chills, fever, and generalized aching of two days duration. A physical examination was negative except for a macular rash present on his body.

On admission, the patient's temperature was 104 F. His complete blood count and urine were within normal limits, but his Weil-Felix reaction (Proteus O X 19) was positive through 1:1,280 dilution.

Para-aminobenzoic acid, 2 Gm. three times daily, was started on March 8. The patient's temperature had ranged between 102 and 104 F. before administration of the drug but dropped to normal on March 12. The patient was free of fever, headache, and felt fine. He received a total dosage of 66 Gm. with no untoward effects. The highest para-aminobenzoic acid blood level obtained was 1 mg. per 100 cc. The patient was discharged on March 19, recovered.

CASE 2.—R. N. A., a white man aged 39, was admitted to the hospital on December 29, 1945, complaining of "fever, chills, headaches, and all my bones ache" for nine days. He had received "a sulfa drug" but without results. His temperature had ranged between 100 and 101 F. during the day and up to 104 F. during the night. He had experienced no respiratory symptoms and physical examination was negative except for his acutely ill appearance and a fading macular rash present on his abdomen.

On admission, his temperature was 103.2 F. His white blood cell count was 7,450 and urinalysis was normal, but the Weil-Felix reaction (Proteus O X 19) was positive through 1:160 dilution. It continued to rise to 1:1,280-1:2,560 and up to 1:40,960 dilution even after medication with para-aminobenzoic acid had been started.

The dosage administered was 2 Gm. every two hours, started on December 31. The patient's temperature had ranged between 101 and 102 F. before administration of the drug. His temperature dropped rapidly to normal by January 1, 1946, at which time he was relieved of headaches, chills, and felt much better generally. He received a total dosage of 240 Gm. with no side effects. The highest para-aminobenzoic acid blood level obtained was 3.0 mg. per 100 cc. The patient was discharged on March 15, recovered.

CASE 3.—P. S., a Negro man aged 45, was admitted to the hospital on October 14, 1945, acutely ill, complaining of "fever, chills, and severe headaches" of four days duration. A physical examination was entirely negative.

On admission, his temperature was 102 F. The white blood cell count was 9,000 and urinalysis normal. Serologic tests were positive and the Weil-Felix reaction (Proteus O X 19) was positive through 1:160 and later 1:1,280 dilution.

Para-aminobenzoic acid, 2 Gm. every two hours, was started on October 17. The patient's temperature had ranged between 101 and 102 F. before the administration of the drug but had returned to normal by October 20. The patient was free of all his constitutional symptoms and felt well. He had received a total dosage of 168 Gm. with no toxic effects. The highest blood level obtained was 1 mg. per 100 cc. The patient was dismissed on October 25, recovered.

CASE 4.—E. M. W., a white man aged 25, was admitted to the hospital on July 21, 1945, complaining of "chills, fever, and abdominal pain for three days." Physical examination revealed an acutely ill young man with an enlarged tender spleen. On the third hospital day, his abdomen showed a macular rash which disappeared three days later. The patient received sulfadiazine because it was thought at first his symptoms were due to an upper respiratory infection, but there was no response.

On admission, his temperature was 104 F. His white blood cells ranged between 4,800 and 6,200, and repeated urinalyses were normal, but his positive Weil-Felix reaction (Proteus O X 19) rose steadily from 1:40 through 1:2,560 dilution.

Para-aminobenzoic acid, 2 Gm. every two hours, was started on July 25. The patient's temperature ranged between 100 and 104 F. before administration of the drug but had returned to normal by July 27, at which time the patient had been relieved of all his symptoms. The patient complained of being awakened for medication during the night, so on July 29, it was decided to give 2 Gm. every two hours from 8 a. m. to 10 p. m. His temperature returned to 102 F. for thirty-six hours, after which it returned to normal. He received a total dosage of 232 Gm. with no side effects. No para-aminobenzoic acid blood levels were taken. The patient was discharged on August 6, recovered.

CASE 5.—J. B. L. B., a white man aged 42, was admitted to the hospital on July 18, 1945, complaining of headaches, chills, and fever of three days duration. Physical examination revealed enlarged cervical glands and a palpable nontender spleen.

On admission, the patient's temperature was 102 F. His white blood cell count was 13,050, and the urinalysis was consistent with a low grade urinary in-

*Professor of Clinical Medicine, Baylor University College of Medicine, and Chief, Internal Medicine, Southern Pacific Railway Hospital.
†Resident in Medicine, Southern Pacific Railway Hospital.
Accepted for publication March 21, 1946.

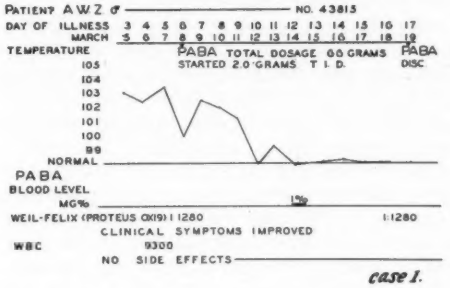
fection. Serologic studies were negative but his positive Weil-Felix reaction (Proteus O X 19) rose from 1:1,280 through 1:40,960 dilution.

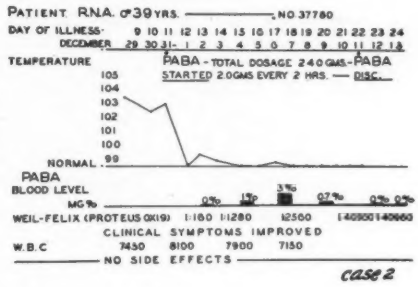
Para-aminobenzoic acid, 2 Gm. every two hours, was started on July 21. The patient's temperature had ranged between 99 and 102 F. before the para-aminobenzoic acid was started. On July 22 his temperature returned to normal, at which time he improved clinically. He received a total dosage of 144 Gm. No blood levels were obtained. The patient was discharged on July 27, recovered.

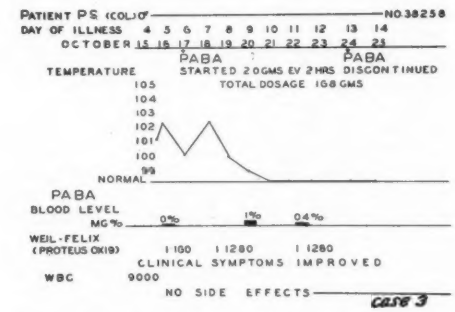
CASE 6.—G. A. G., a Negro boy aged 16, was admitted to the hospital on August 2, 1945, complaining of chills, fever, headaches, and vague abdominal pain of five to seven days duration. Physical examination revealed an acutely ill boy with fibrillary twitchings of facial muscles and generalized abdominal tenderness. The physical examination was otherwise negative.

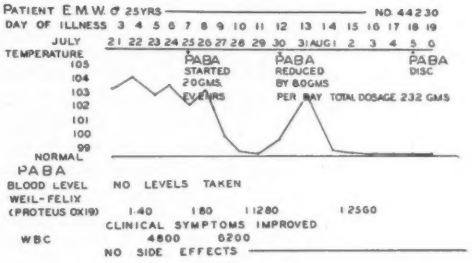
On admission, the patient's temperature was 100 F. and rose rapidly to 105 F. The white blood cell count ranged between 5,000 and 6,700; the urinalysis was normal; but the Weil-Felix reaction (Proteus O X 19) was positive through 1:320 dilution and continued to rise to 1:20,480.

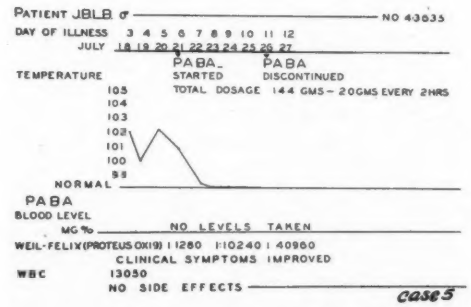
Para-aminobenzoic acid, 2 Gm. every two hours, was started on July 7. The patient's temperature had previously ranged between 102 and 104 F. but fell to normal by July 9. His headaches and generalized pains disappeared at this time. He received a total dosage of 168 Gm. without any side effects. A para-aminobenzoic acid blood level of 8.8 mg. per 100 cc. was obtained. The patient was discharged on August 16, recovered.

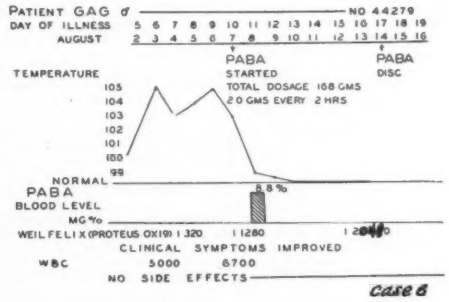

PATIENT A.W.Z. ♂ NO. 43815
DAY OF ILLNESS 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
MARCH 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
TEMPERATURE
PABA TOTAL DOSAGE 60 GRAMS
STARTED 2.0 GRAMS T. I. D.
PABA DISC
105 104 103 102 101 100 99
NORMAL
PABA BLOOD LEVEL MG%
1%
WEIL-FELIX (PROTEUS OX19) 1:1280 1:1280
CLINICAL SYMPTOMS IMPROVED
WBC 9300
NO SIDE EFFECTS
case 1.


PATIENT R.N.A. ♂ 39 YRS. NO. 37780
DAY OF ILLNESS 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
DECEMBER 29 30 31 1 2 3 4 5 6 7 8 9 10 11 12 13
TEMPERATURE
PABA - TOTAL DOSAGE 240 GMS. - PABA
STARTED 2.0 GMS EVERY 2 HRS. — DISC.
105 104 103 102 101 100 99
NORMAL
PABA BLOOD LEVEL MG%
0% 1% 3% 0% 0% 0%
WEIL-FELIX (PROTEUS OX19) 1:160 1:1280 1:2560 1:40960 1:40960
CLINICAL SYMPTOMS IMPROVED
W.B.C 7450 8100 7900 7150
NO SIDE EFFECTS
case 2


PATIENT P.S. (COL.) ♂ NO. 38258
DAY OF ILLNESS 4 5 6 7 8 9 10 11 12 13 14
OCTOBER 15 16 17 18 19 20 21 22 23 24 25
TEMPERATURE
PABA STARTED 2.0 GMS. EV. 2 HRS. DISCONTINUED
TOTAL DOSAGE 168 GMS.
105 104 103 102 101 100 99
NORMAL
PABA BLOOD LEVEL MG%
0% 1% 0.4%
WEIL-FELIX (PROTEUS OX19) 1:160 1:1280 1:1280
CLINICAL SYMPTOMS IMPROVED
WBC 9000
NO SIDE EFFECTS
case 3


PATIENT E.M.W. ♂ 25 YRS. NO. 44230
DAY OF ILLNESS 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
JULY 21 22 23 24 25 26 27 28 29 30 31 AUG. 1 2 3 4 5 6
TEMPERATURE
PABA STARTED 2.0 GMS. EV. 4 HRS.
PABA REDUCED BY 8.0 GMS PER DAY
PABA DISC
TOTAL DOSAGE 232 GMS.
105 104 103 102 101 100 99
NORMAL
PABA BLOOD LEVEL
NO LEVELS TAKEN
WEIL-FELIX (PROTEUS OX19) 1:40 1:80 1:1280 1:2560
CLINICAL SYMPTOMS IMPROVED
WBC 4800 6200
NO SIDE EFFECTS
case 4


PATIENT J.B.L.B. ♂ NO. 43635
DAY OF ILLNESS 3 4 5 6 7 8 9 10 11 12
JULY 18 19 20 21 22 23 24 25 26 27
TEMPERATURE
PABA STARTED
PABA DISCONTINUED
TOTAL DOSAGE 144 GMS — 2.0 GMS EVERY 2 HRS.
105 104 103 102 101 100 99
NORMAL
PABA BLOOD LEVEL MG%
NO LEVELS TAKEN
WEIL-FELIX (PROTEUS OX19) 1:1280 1:10240 1:40960
CLINICAL SYMPTOMS IMPROVED
WBC 13050
NO SIDE EFFECTS
case 5


PATIENT G.A.G. ♂ NO. 44279
DAY OF ILLNESS 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
AUGUST 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
TEMPERATURE
PABA STARTED
PABA DISC
TOTAL DOSAGE 168 GMS
2.0 GMS EVERY 2 HRS.
105 104 103 102 101 100 99
NORMAL
8.8%
PABA BLOOD LEVEL MG%
WEIL-FELIX (PROTEUS OX19) 1:320 1:1280
CLINICAL SYMPTOMS IMPROVED
WBC 5000 6700
NO SIDE EFFECTS
case 6

COMMENT

The 6 cases reported have been observed in the Medical Service of the Southern Pacific Hospital in Houston, Texas. The diagnosis was made on clinical symptoms and findings and by the determination of the Weil-Felix reaction with B. Proteus O X 19. Extremely high titers were noted in the cases reported, two reaching a titer of 1:40,960. This serum was checked and the reading found correct.

The blood levels of para-aminobenzoic acid in these cases were considerably lower than those reported by Yeomans and others.[8]

This may have been due to the fact that the initial priming of the blood with large doses of para-aminobenzoic acid as recommended by Yeomans and his associates,[8] namely 4 to 8 Gm., was not followed in these cases. Because of the rapid elimination of para-aminobenzoic acid from the system Yeomans[8] advised that 2 Gm. be given every two hours around the clock, and in the cases reported here this was not the procedure in all instances. The response that has been noted by us seemed rather dramatic, even with the essentially lower blood levels of the drug. It is assumed that good results may be obtainable with lower blood levels as has been observed in the use of the sulfonamides. It should be stressed that even with the large doses of the drug used, no untoward side effects were observed in either the blood or urine. Yeomans[8] reported an occasional leukopenia, which might have been a result of the high blood levels he obtained.

SUMMARY

Six cases of endemic murine typhus are reported, which responded favorably to para-aminobenzoic acid medication. The drop in temperature and relief of symptoms were almost dramatic in their effect. No side effects in the use of the drug were noted. It is hoped that with the prevalence of typhus fever in this area, more observations will be made on the use of para-aminobenzoic acid as a means of therapy.

We wish to acknowledge with thanks the assistance of the Art Department of the Baylor University School of Medicine, for preparation of the charts.

REFERENCES

1. Anigstein, L., and Bader, M. N.: Para-Aminobenzoic Acid: Its Action on Experimental Rocky Mountain Spotted Fever, Texas Repts. Biol. Med. 3:253-254 (Summer) 1945.

2. Department of Health, Houston, Texas: Personal communication.

3. Dyer, R. E.: Charles Franklin Craig Lecture for 1940, Control of Typhus Fever, Am. J. Trop. Med. 21:163-183 (Mar.) 1941.

4. Greiff, D.; Pinkerton, H.; and Moragues, V.: Effect of Enzyme Inhibitors and Activators on Multiplication of Typhus Rickettsiae; Penicillin, para-Aminobenzoic Acid, Sodium Fluoride, and Vitamins of B Group, J. Exper. Med. 80:561-574 (Dec.) 1944.

5. McNeil, H. L.: Endemic Typhus Fever in South Texas, Texas State J. Med. 12:188-191 (Aug.) 1916.

6. Rose, H. M.; Duane, R. B.; and Fischel, E. E.: The Treatment of Spotted Fever with para-Aminobenzoic Acid, J. A. M. A. 129:1160-1161 (Dec. 22) 1945.

7. Snyder, J. C.; Maier, J., and Anderson, C. R.; Report to the Division of Medical Sciences, National Research Council, Dec. 26, 1942.

8. Yeomans, A., and others: Therapeutic Effect of para-Aminobenzoic Acid in Louse Borne Typhus Fever, J. A. M. A. 126:349-356 (Oct. 7) 1944.

Health is not an inalienable right. It is a privilege. Privileges invariably entail equivalent responsibilities. It is so easy to accept privileges that before long mankind takes them for granted and claims them for inherent rights. Nature grants few rights, preferring to demand that privileges be earned. Health, like freedom and peace, continues only as we exert ourselves wisely to maintain it.—Edward J. Stieglitz, M. D., A Future for Preventive Medicine.

PROSTIGMINE USAGE IN PEDIATRICS

GUY A. TITTLE, M. D.
DALLAS, TEXAS

This discussion is to review the possibilities, as well as the limitations, of the much heralded drug prostigmine.

In the first place, what is prostigmine and what is its pharmacological effect when administered to the human system? Prostigmine is a synthetic compound resembling physostigmine (eserine).

Its pharmacological effect is vagatonic, but not attended usually by side reactions. It inhibits the destruction of acetylcholine by cholinesterase, which property offers the greatest benefits by affording a better transmission of nerve impulses across the myoneurol junction, thereby enhancing cholinergic action by maintaining a maximum of body acetylcholine. A further advantageous result is a mild spinal cord depressant action, which assists in relaxing the spastic muscles, thus increasing the comfort of the patient and the possibilities of muscle training.

To date the drug has been tried in a variety of conditions, principally in the pediatric field.

First in the list of conditions so treated is myasthenia gravis. Prostigmine has been used extensively in the acute stages of poliomyelitis, more extensively in subacute and chronic polio. It has been used with varying effect in chronic spastic conditions due to cerebral hemorrhage of the newborn. Probably most important of all, it has been found effective in some conditions involving the intracranial nerves, especially cases of hearing loss and some cases of optic disturbance.

The two salts of the drug are prostigmine bromide, administered orally, and prostigmine methylsulfate, by intramusclar injection. Oral prostigmine bromide seems to be the choice drug in acute poliomyelitis and in conditions involving the intracranial system. The dosage ranges from two to four 15 mg. tablets daily. It is preferable to administer a moderate dose of atropin sulphate to counteract the depressing effect on the spinal cord where this action is not desirable.

Prostigmine methylsulfate is commonly employed in the treatment of myasthenia gravis and in spastics.

The drug for parenteral use is in two strengths: 1:2,000 containing .5 mg. of the drug; 1:4,000 containing .25 mg. Injections are usually administered twice weekly for a

Read before the Section on Pediatrics, State Medical Association of Texas, Annual Session, Galveston, May 7, 1946.

varying period, depending upon results obtained, and usually for several months.

The following reports have been gleaned from recent literature.

(*Herman Kabat*).[4]—Dr. Kabat states that (*Herman Kabat*).[4]—Dr. Kabat states that prostigmine decreases muscle spasm and inhibits incoördination in acute and chronic poliomyelitis, and brings about acceleration of recovery in polio, and that improvements obtained are permanent. He also discusses the use of the drug in rheumatoid arthritis and in spastic cerebral palsy. Of 430 patients with various types of neuromuscular disability who have been treated, a majority have been significantly benefited and a few have been benefited drastically. Dr. Kabat states that the duration of the disability makes little difference in the prognosis. The drug, he says, brings relief in a large number of cases regardless of the etiological factor. His routine procedure has been in general .5 mg. daily to twice weekly by injection and 30 to 60 mg. daily orally. In practically all cases no untoward effects were seen and the patients went about their usual daily habits. Dr. Kabat reports a group of 10 spastic paralysis patients, none of whom had understandable speech in spite of much phonetic training, who were treated eight months with this therapy. All were improved greatly as to their ambulatory troubles, and 9 of the 10 could carry on understandable conversation. Before treatment, all had to be fed by an attendant. After four months, 9 could feed themselves fairly well.

Drs. Kabat and Knapp were probably first to use prostigmine in polio extensively, followed soon by Drs. Boines, Eveleth, and Ryan. All agree that prostigmine has remarkable value in subacute and chronic cases, to wit: it relaxes muscle spasm, increases range of motion, causes deformities to improve or disappear, improves coördination, increases strength, and relieves fatigue.

Furthermore, definite results may be obtained even many years after the acute infection. Obviously special muscle training measures should not be neglected.

The physicians named all agree that the value of the drug in acute polio is subject to debate and further study.

Neostigmine in Acute Anterior Poliomyelitis (M. J. Fox and W. K. Spankus).[2]—The author reasoned that since Kabat and Knapp had reported good effects in prostigmine treatment of subacute and chronic polio, its advantages in acute polio should be sought. Their cases were definitely diagnosed by the usual methods and consisted of 24 cases of 5.5 days average standing.

Their conclusions are as follows:

1. Prostigmine produces a partial relaxation of the spastic muscles in a majority of cases. This relaxation is not dramatic, not constant, and not lasting.
2. The combined use of prostigmine and local therapy, such as the Kinney treatment, results in most cases in a perceptible persistent relaxation of spastic muscles, and this combined therapy is definitely warranted.
3. The drug appears to be of little value in bulbar poliomyelitis.

Management of Infantile Cerebral Paralysis (Paul N. Jepson).[3]—Dr. Jepson reports on 25 cases of infantile cerebral paralysis treated with oral prostigmine. He concludes there is sufficient evidence to warrant the continued use of prostigmine. Some beneficial results were observed in all cases, remarkable results in a large percentage. He observes further that those treated between the ages of 1 and 4 years show a much greater degree of improvement than those treated after the age of 4.

Treatment of Deafness and Contiguous Nerve Disorders (I. Carroll Davis and John C. Rommel).[1]—In the autumn of 1936, the writers began the use of prostigmine hypodermically in treating deafness. It improved the hearing exceptionally in some patients. Patients with early catarrhal deafness often recovered remarkably after four or five injections. They, therefore, conclude that prostigmine is a valuable remedy for deafness.

They at first tried oral prostigmine alone, but later found that better results were obtained when concurrent subcutaneous treatment was given.

The authors report 24 cases of chronic deafness under combined treatment. Good recovery of hearing was obtained in 7, satisfactory improvement in 6, slight improvement in 9. One patient had a concurrent trigeminal neuralgia which was entirely relieved.

Most of these cases were of so-called catarrhal deafness and the authors suggest that general otological measures of relief should not be neglected, along with prostigmine therapy.

Effect on Hearing Loss and Tinnitus (Henry D. Taterka).[7]—Since Dr. Taterka's discussion on the value of treatment in hearing loss was not followed by audiometric studies, I shall present his conclusions only:

1. Prostigmine has proved of definite value in the treatment of tinnitus as an otological symptom and merits further investigation.
2. The effect on hearing, which was noted

during treatment, merits further study with accurate audiometric determination.

3. Of 21 patients 12 were definitely improved.

4. It is interesting to note that of the 3 cases diagnosed as otosclerosis, all reported definite improvement.

5. While all patients were not helped, no other single remedy or combination of remedies has proved so satisfactory.

Treatment of Spastic Cerebral Palsy (H. J. Schaubel).[6]—Prostigmine is a valuable adjunct to the muscle and phonetic training program in spastic cerebral palsy. Schaubel reports eight months treatment of 10 tetraplegias, ages 6 to 14 years, who responded to treatment from a group of 32. Oral treatment only, using prostigmine bromide, dosage adjusted to age was given. Improvement was observed in severe as well as in mild cases. All 10 were unable to talk. Six weeks medication found 3 able to utter understandable words, and at the end of the eight months period, with concurrent phonetic training, only 1 had residual speech difficulty. Prostigmine seemed also responsible for a decrease in muscle spasm with a marked degree of improved locomotion. Seven subjects who had never walked without the aid of walking bars were enabled to walk with crutches only. The other 3, formerly capable of no type of ambulation, were able to operate mobile walkers. Eventually, he states, 6 have become able to walk without artificial aid. All 10 who responded to treatment, unable prior to treatment to feed themselves, became able to do so. No bad effects were noted in any.

Use for Impaired Hearing (Morris Rosenthal).[5]—Over a period of years 24 cases of hearing loss were treated, 6 patients with hearing impairment of only a few months. Audiometric determination was made in establishing conclusions. Results of treatment were summarized as follows: 19 patients showed objective improvement; 16 showed subjective improvement; 9 showed no improvement; 11 showed objective improvement in all frequencies.

This particular observation was noted: objectively, that is, judging from the audiometric readings, practically all patients were improved. However, those patients with the lower decibel hearing loss, 35 or under, even though receiving but a 5 decibel improvement, reported subjective relief, while those with a naturally high decibel loss, though improved 10 decibels or more, showed insufficient improvement for subjective relief.

The following cases are from personal observation:

CASE REPORTS

CASE 1.—Five patients, ages 2 to 7 years, with acute poliomyelitis definitely diagnosed by the usual methods, were given 10 mg. prostigmine bromide every eight hours in conjunction with other general nursing measures. Muscle spasm was never severe in any of the patients, 4 recovered completely, 1 has a residual mild unilateral shoulder drop.

CASE 2.—L. M., a boy, age 6, developed acute encephalitis following an obstinate attack of tonsillitis. After ten days, sequelae consisted of partial paralysis (spastic in type) of one forearm and almost total blindness. After these symptoms had continued unabated for a period of ten days, 45 mg. prostigmine was given daily orally. After four days improvement was marked; in eight more days the forearm became usable and sight was good enough to allow him to distinguish persons. At present, after two months treatment, the residual trouble in the arm is only moderate and the child can distinguish letters from fine print. This case was so fantastic I hardly feel justified in drawing any definite conclusions.

CASE 3.—R. A., a boy of 5 years, had spastic paralysis caused by apparent cerebral hemorrhage at birth. Paralysis involved both arms and both legs. He was unable to speak any understandable words. There was no impairment of hearing. He has had eighteen weekly injections of prostigmine, .5 mg. each, with 30 mg. orally each day. Now he is able to speak some understandable words and is being taught with remarkable success by a speech training teacher. Muscle coördination is definitely improved.

CASE 4.—J. M., a girl 6 years of age, had spastic paraplegia with mild spastic speech, and incoördinate movement of hands and face. After the third dose of prostigmine her teacher reported practical cessation of incoördinate movements of hands and face. The mother says she handles large words and is decidedly more normal mentally. At office examination, all the improvements were objectively found to be correct. A year trial on tricycle riding had failed. Now she rides handily. April 15, after two months treatment, the child is rapidly approaching normal.

CASE 5.—M. C., a 6 year old boy, when 3 days old, had convulsions. He then developed properly until he had recurrent acute cerebral hemorrhages at the age of 15 months. He lost his speech and became a poorly walking spastic. After four weeks of combined prostigmine treatment, his speech is better and he walks better. He had a badly needed circumcision under general anesthetic without any untoward event. The mother says the child is more natural and pleasurable, too. This is a rather severe case. Vitamin K and calcium are being given to combat possible recurrent hemorrhage. No cause can be found to account for the pathologic condition. The prognosis is not too promising.

CASE 6.—W. J., a 4 year old boy, with spastic speech, drools constantly, and has very large tonsils and signs of adenoids. Prostigmine treatment was begun with .5 mg. injection weekly and prostigmine bromide by mouth, 30 mg. daily. Three weeks later, the boy's teacher reported remarkable results. March 5, a tonsillectomy-adenoidectomy was performed with uneventful recovery. The boy said "bye-bye" and "thank you" normally. Drooling had completely ceased. April 17, after two months treatment, the child uses better speech, shows a changed behavior, and feeds himself. The parents are thoroughly overjoyed with the results.

CASE 7.—F. S., a boy 6 years old, showed mental deficiency and speech aphasia. He was able to speak some understandable words. Encephalitis spastic paraplegia was the diagnosis. He was barely able to walk alone, and was usually supported by his parents. His facial expression was very disturbed. After one month of weekly injections of prostigmine

nd 30 mg. daily by mouth, he is actually able to kip unsupported, puts words together, and counts to 10 with perfect diction. It appears that encouraging changes are to be expected in this young oy.

CASE 8.—J. C., a girl 4 years of age, had congenital deafness. After four weeks of .5 mg. prosigmine weekly by injection, 15 mg. nightly by mouth, he speech teacher feels there is a degree of acceleraion in speech activity. No conclusive evidence conerning improvement of hearing is available.

CASE 9.—S. W., a girl 4 years old, showed a spastic peech pattern speaking single words. Her history evealed encephalitis at 1 year. Prostigmine injecion and 15 mg. daily by mouth were begun. After hree weeks, she was attempting new words. After hree more weeks, her vocabulary and speech articuation are definitely improved. Soon she is to enter a speech training school for the first time.

CASE 10.—R. W., a girl 2.5 years old, had typical Little's disease. March 5, 1946, she was given a fourth injection of prostigmine and prostigmine was started by mouth, 15 mg. doses. There were no immediate results. March 26, she crept for the first time in her life. April 15, she showed no further improvement and the prognosis is quite doubtful.

CASE 11.—M. R., a girl age 8 years, had congenital early deafness. Under the usual treatment for two months her hearing ability has definitely improved. She answers the mother's call from an adjoining room for the first time in her life. Her speech enunciation is very nearly normal. Speech training will, of course, be continued.

Three other cases of congenital deafness are under treatment but for too short a period to warrant a preliminary appraisal of the drug's value.

Likewise, under treatment and observation are 19 other cases of varied types of spastics. Some optimistic signs are already evident, though the patients have been under treatment for less than three months.

CONCLUSIONS

I admit that results with prostigmine are limited and not too promising but they are worth utmost consideration in pediatric cases in which heretofore there has been practically no promise.

I do not join the over optimistic in this limited report of experience, but there seems little doubt that some real and lasting results through a course of several months longer will be seen.

Certainly a large number of these patients, in fact a large majority, will derive no benefit, but the evidence that it is of value in some is convincing. The use of prostigmine in such pediatrics cases is well worth a thorough trial.

REFERENCES

1. Davis, T. C., and Rommel, J. C.: Treatment of Deafness and Contiguous Nerve Disorders with Prostigmin, Clin. Med. & Surg. 46:329-330 (Aug.) 1939.
2. Fox, M. J., and Spankus, W. K.: The Value of Neostigmin in Acute Anterior Poliomyelitis, J. A. M. A. 28:720-722 (July) 1945.
3. Jepson, P. N.: The Use of Prostigmine in the Management of Infantile Cerebral Paralysis, J. Pediat. 28:65 (Jan.) 1946.
4. Kabat, H.: Neostigmine Therapy of Neuromuscular Dysfunction, M. Ann. District of Columbia 14:248 (June) 1945.
5. Rosenthal, M.: Use of Prostigmine for Impaired Hearing, Arch. Otolaryng. 34:540-573 (Sept). 1941.
6. Schaubel, H. J.: Prostigmine As Adjunct in Treatment of Spastic Cerebral Palsy, Physiotherapy Rev. 24:236-237 (Nov.-Dec.) 1944.
7. Taterka, H. D.: Preliminary Study of Effect of Prostigmin on Tinnitus, Laryngoscope 52:299-303 (Apr.) 1942.

3600 Fairmount.

ABSTRACT OF DISCUSSION

Dr. James H. Park, Jr., Houston: Before the introduction of prostigmine as an adjunct in the treatment of spastic paralysis in childhood, the results were unsatisfactory and discouraging to the patient, the parents, and the physician. Prostigmine is a therapeutic agent which assists by lessening or actually abolishing spasticity of muscles. That helps the patient to relax and permits of more coördinated movements of the extremities.

It seems to work best in those patients under 10 years of age. While it is by no means a "cure-all" or miracle drug, as certain newspapers and periodicals would have the laity believe, the literature justifies its continued usage in the therapy of spasticity of muscles, especially of the infantile cerebral type. Lately, improvement in nerve deafness after its use has been reported by some observers.

In that connection, a 3.5 year old male patient of mine, who recently recovered from an acute pneumococcic meningitis after two relapses of the disease, developed bilateral nerve deafness. He will be given whatever advantages the drug may hold in store for him.

Those who have had the most experience with prostigmine in the conditions under discussion emphasize the importance of giving it in adequate dosage for three to six months or until improvement can no longer be demonstrated.

Two or more weeks may be required before definite improvement can be detected. A white boy 14 years of age, at Hermann Hospital, who exhibited rheumatoid arthritis, was given .5 mg. of prostigmine methylsulfate and atropin sulfate 1/150 grain every eight hours for three or four weeks. He also received the customary physiotherapy. Slight improvement was noted. Prostigmine was then discontinued. The boy's muscles soon became stiff and painful again. He requested that the hypodermic administration of prostigmine be resumed. It was, with immediate relief.

Reports such as the essayist has presented serve as an incentive to further studies by others, which should lead to the standardization and proper evaluation of prostigmine therapy in pediatrics.

"SHELL SHOCK" DECREASED IN WORLD WAR II

Hysteria, the "shell shock" of World War I, was greatly decreased in World War II, according to the Surgeon General's office. At the time of the first war hysteric conditions in which a mental malady was manifested as a syndrome which simulated, without organic basis, some pathologic physical condition were common both among military personnel and civilians. Shortly after the war psychiatrists began to report that no hysterical patients were appearing, but that there was an increase of "anxiety neurosis," an overwhelming fear without specific physical manifestations. It was explained that the pattern of reaction of a person with a somewhat unstable nervous system was changing with the changing times, and that hysteria was a disease of a simpler environment. In the war just past, the changed reaction persisted, and a study by David B. Davis and John W. Bick of the Army Medical Corps indicates that only about 1 out of 5 of more than 1,000 neuropsychiatric patients returned to one American Army hospital from overseas was a victim of hysteria.—S. G. O. Notes, July 31, 1946.

WATER IN RELATION TO HEALTH PROBLEMS IN CHILDREN IN TEXAS

ARILD E. HANSEN, M. D., Ph. D.
GALVESTON, TEXAS

The problem of child health in Texas is particularly great and one which demands active effort on the part of physicians, public health workers, legislative bodies, and the general public. The magnitude of this problem was brought to my attention quite forcibly recently when it devolved upon me to discuss with the pediatricians of the country the subject of rheumatic fever and rheumatic heart disease as a child health problem in the United States. Rheumatic heart disease is one of the chief causes of death in children of school age. In 1940, for example, in children from 5 to 14 years of age this disorder caused more deaths than the combined fatalities from diphtheria, poliomyelitis, scarlet fever, measles, whooping cough, and meningococcic meningitis. In 1941 rheumatic fever was responsible for more deaths than all forms of tuberculosis in this particular age group. These rather startling statements stimulated consideration of child health in Texas from the comparative viewpoint. It was rather astounding to realize the quantitative relationship of these deaths in children. The total deaths in school age children for the entire United States attributed to rheumatic fever and rheumatic heart disease, tuberculosis, plus the common childhood diseases mentioned above, equal about one-half of what may be called unnecessary deaths in Texas children. For the years 1940 and 1941 more children died in Texas than in New York, and the latter state has somewhat over twice the population of our great state. According to vital statistics of the United States the deaths in children under 20 years in Texas and New York in round numbers, were 15,500 and 14,900 for 1937 and in 1941 they were 12,200 and 11,900 respectively.

This information is of value in order to determine the cause of these deaths so that attempts may be made to correct them. Last year I analyzed in a rather cursory way the disease conditions which contribute to the high death rate in Texas children. In the first place, it is particularly heartening to find that the over-all death rate in Texas has been decreasing remarkably in the past decades just as in the rest of the country. The decrease in typhoid fever deaths has been phenomenal. Furthermore, it is interesting to note that the crude death rates for such conditions as cancer, diabetes, exophthalmic goiter, chronic rheumatic disease of the heart, and heart disease in general are actually lower in Texas than in the United States as a whole. The rates for such conditions as meningitis, syphilis, infantile paralysis, acute rheumatic fever, and appendicitis are practically the same in Texas as for the country as a whole. Rather astounding is the fact that the rates for such easily preventable diseases in children as typhoid, diphtheria, whooping cough, and even tuberculosis are greater in Texas than in the United States as a whole. As is usual in various communities with high death rates for children, the conditions which contribute materially to these high rates are prematurity and particularly those conditions classed under the "diarrheas and enteritis." In these classifications the rate for Texas is twice that of the country as a whole.

It is virtually impossible to define precisely the exact role that water plays in the death rates in Texas children. This is true because certain diseases, such as typhoid and dysentery, may be water borne. Other diseases may be present because of excessive amounts of water which are conducive to a better breeding ground for mosquitoes in relation to malaria. In still other aspects the mineral content of the water, as for example, iodine and fluorine, may be of significance in the maintenance of a healthy state of the child. Water in relation to the health problem has been emphasized by many workers in the field of public health, especially in relation to man's external environment. Of special interest to the pediatrician and practicing physician, on the other hand, is water in relation to man's internal environment. In spite of the many careful scientific investigations in the field of water metabolism too little attention has been given to the quantitative significance of water requirements for infants and children.

One of the most significant features of human metabolism is that the water requirement for infants on the basis of weight is normally three times greater than that of adult subjects. In sick infants the relative requirement is even greater. In diarrhea one may attribute the real cause of death to an insufficiency of water. It is almost a conditioned reflex for physicians in prescribing for the infant with diarrhea to give as the first order "withhold all food" or "starve for twenty-four or forty-eight hours." Inasmuch as the natural food of infants is composed of seven-eighths parts water, withholding all food means that a negative water balance develops because of

From the Department of Pediatrics, University of Texas School of Medicine.
Read before the Section on Public Health, State Medical Association of Texas, Annual Session, Galveston, May 7, 1946.

(1) a decreased intake, (2) a loss of water through the stool, (3) an increased requirement due to enhanced metabolism existing with fever, and (4) the possible co-existence of vomiting. True enough, the advice "offer fluids such as water or weak tea" is given by the physician, but seldom is an exact idea of the quantitative value of these emphasized. Consequently, death often results in the infant with diarrhea because of dehydration, frequently with an acidosis. It was pointed out years ago by Rubner that a man may lose 40 per cent of his body weight, practically all of his stored fat and carbohydrates, and as much as one-half of his body protein and he may survive for a month or longer without all food. He cannot, however, survive without water for more than a few days and if one-fifth to one-fourth of the body weight is lost because of lack of water, death results. Hence, our number one consideration in the care of infants with diarrhea is to maintain proper water balance.

It appears that not only should all practicing physicians be familiar with water requirements for infants and children and know how to meet them, but likewise public health workers, hospital personnel, and the general public should be familiar with the quantitative significance of water in the maintenance of the health of children. Naturally it is not to be expected that these latter completely understand the field of water metabolism, inasmuch as it is indeed complicated. The relatively enormous water requirement for the infant severely ill with diarrhea might, however, be pointed out. From a comparative viewpoint a 150 pound man dehydrated to a similar degree as the infant with severe diarrhea would require 50 pounds of water in a twenty-four hour period. In the terms of flasks at a bedside ready for parenteral administration of fluid it is apparent that this amount is indeed startling. Nonetheless, the infant, because of his active metabolism, actually needs fluids in these amounts in order that body functions may not be impaired. By means of simple calculations we may assume that a previously healthy infant weighing 10 kg. because of severe diarrhea and inadequate fluid consumption loses 1.5 kg. This means that the fluid between the cells has practically disappeared, the circulating vascular system has become stagnant resulting in impaired kidney function, and in addition there will probably be ketosis due to an excessive burning of fat resulting from the lack of available carbohydrate. It is apparent that it is necessary to replenish this fluid loss. During the next twenty-four hours there might be additional loss of water with, of course, electrolytes in the stools which may amount to an additional 0.5 kg. As stated previously the normal fluid requirement for infants is in proportion far greater than for adults. In fact, in a twenty-four hour period the amount consumed equals 10 to 15 per cent of the body weight in children compared with but 2 to 4 per cent of the body weight per day in adult subjects. The normal quantity of fluid to be consumed by such an infant would be about 150 cc. per kilogram body weight or another 1.5 kg. To replenish completely the fluid loss and to meet his normal requirement would take then perhaps 3,000 to 3,500 cc. during the twenty-four hour period. Hence, it is apparent to replenish the body fluids would require supplying water and aqueous solution equivalent to 30 to 35 per cent of the body weight. How such fluid should be administered and the type of electrolyte preparations to be used requires the expert knowledge and ability of the practicing physician and his especial pediatric trained nurses.

The knowledge of water metabolism in the scientific field has been enhanced tremendously in the past decade; likewise the practical methods for the judicious use of fluids in clinical medicine have been increased. One of the distinct advances in the water and electrolyte field has been made by a pediatric colleague, Dr. Daniel C. Darrow, of Yale University. Water is inextricably related in its functions to electrolytes. For descriptive purposes, water within the body cells accounts for 50 per cent of the body weight and the electrolytes of especial significance here are potassium and phosphorus. The water in the other two compartments, namely the circulating vascular system and the so-called interstitial fluid compartments, comprises another 20 per cent of the body weight. The chief electrolytes in these compartments are sodium and chloride ions. No attempt will be made here to discuss the interrelationships between these ions; however, it may be pointed out that Darrow has found that in diarrhea along with the fluid and electrolyte loss which develops, a specific loss of potassium occurs from the body cells. Because of this loss of potassium from within the cells there occurs an increase of the sodium within the cells. This discovery is not only of great scientific significance but follow-up studies by Darrow have shown that this information is of practical value. In a personal communication Darrow stated that the administration of an isotonic electrolyte solution with the following composition: potassium chloride 2 Gm., sodium chloride 3 Gm., molar sodium lactate 40 cc., and water

710 cc., is of distinct advantage in the treatment of diarrhea. When this solution was administered quantitatively correct to infants with severe diarrhea in one outstanding medical center, there resulted a drop to but one-sixth of the previous mortality rate.

In a current communication Darrow revealed that in some cases during the recovery from the dehydration resulting from severe diarrhea there was evidence of a transfer of the sodium from extracellular to intracellular compartments when the usual solutions (containing sodium chloride, sodium lactate, and dextrose) were employed. This transfer of sodium resulted in even further loss of potassium from within the cells. The loss of potassium was excessive to the loss of nitrogen. He found further that when these sick infants are treated with isotonic fluids containing the potassium salt there is replenishment of both the intracellular and extracellular electrolytes and the babies look much better than after the usual type of treatment. However, the diarrhea per se was not affected by this regimen.

Darrow realizes there are many problems still to be worked out in the complete understanding of the water and electrolyte metabolism in relation to diarrhea. The University of Texas Child Health Program has invited Dr. Darrow and his associates to come to Texas this summer so that he may be able to continue these studies. The complete facilities of the Department of Pediatrics of the University of Texas School of Medicine will be available to him. Physicians caring for infants severely ill with diarrhea are invited to refer these sick infants to the Children's Hospital at the Medical School in Galveston.

In closing, it is apparent that some advantage has been taken of the subject of "water in relation to public health problems." It was felt, however, that emphasis of the significance of intrinsic water metabolism is of importance to all those interested in the public health. True enough, the knowledge of water metabolism in medicine in relation to problems of edema (renal, cardiac, or nutritional) or of the severe loss of water such as in diabetes insipidus should also be included in a complete discussion. In none of these disorders, however, is water so intimately related to the problem both from the viewpoint of the external environment and internal environment as in diarrhea. In fact, when a proper understanding of water metabolism in relation to diarrheal disease is realized by the general public, hospital personnel, and physicians, much will be accomplished in reducing the mortality of one of the major conditions which contribute to high death rate in the children of Texas.

ABSTRACT OF DISCUSSION

Dr. N. M. Atkins, Waco: It is a pleasure to discuss the presentation of Dr. Hansen. It is true that more children die in Texas than any other state in the union, although Texas is sixth in population. The morbidity and mortality rates are far too high for preventable diseases. Physicians know what has been accomplished with typhoid fever and smallpox; and yet, there are preventive measures for other diseases that have not been used for the protection of Texas children. Because of this, a high death rate in children continues. It is also true, that water borne diseases have been reduced to some extent by improved sanitation, but there is still room for considerable more improvement even in the larger cities and towns as well as in rural communities. A high morbidity and mortality rate will continue until the people can be educated, and this means some educated people must take advantage of the preventive measures now available.

Dr. L. P. Walter, Austin: I wish to congratulate Dr. Hansen on this excellent paper which proves that there are many major public health problems in Texas. Deaths from diarrhea and enteritis among infants have proved to be a major problem for many years especially among the Latin American population. During the summer months the large number of patients located on the Texas-Mexico border could easily fill many hospitals.

CLEANING TRAUMATIC WOUNDS BY MULTIPLE FINE-STREAM PRESSURE IRRIGATION—AN IMPROVED METHOD

J. PEYTON BARNES, M. D.
HOUSTON, TEXAS

It is axiomatic that clean wounds heal promptly in minimum time and with maximum functional recovery. It is equally true that dirty wounds, those inadequately cleaned or not cleaned at all, develop infections of varying severity, and all such wounds heal slowly with prolonged morbidity and with less than maximum functional recovery.

The problem, then, is to convert every wound into a clean one, one free of foreign bodies and of bacteria. This is the ideal for which we should strive, and while no ultimate solution has been reached, a number of forward steps have been taken in this direction.

USUAL METHODS OF WOUND CLEANING

Irrigation.—This is a time-honored method and will always be acceptable. Mechanical flushing out of a wound by a gently flowing stream of water, saline solution, or other liquid does remove a rather large proportion of the gross particles of dirt and other foreign bodies that are not too tightly embedded in the soft tissues. But one can readily see that such a stream will not dislodge those finer particles that cling to the tissues even after using very large quantities of solution.

Read before the Section on Surgery, State Medical Association of Texas, Annual Session, Galveston, May 8, 1946.

The method of irrigation with a gently flowing stream therefore is admittedly inefficient and ineffective, and furthermore will carry particles from dirty zones into clean ones.

Brushing and Scrubbing.—Another well-established practice is gently to scrub, mop, or brush, whichever method one prefers, the contaminated area with a sterile soft brush, gauze sponge, or cotton ball while the irrigation above described is being carried out. This adds somewhat to the efficiency of the irrigation, but again it seems evident that the countless tiny particles embedded in the muscle fibers, between little fascial planes, and otherwise hidden from sight are untouched and left as foci of infection.

Local Chemotherapy.—Innumerable agents have been tried to produce sterilization of dirty wounds on local contact, but so far as I know none has yet succeeded. At first everyone thought that local application of the sulfa drugs would be the final answer, but it has proven a mirage. True enough, the sulfa drugs do have a definite effect when applied locally, but they are far from the goal surgeons seek. After all, though, "hope springs eternal," and perhaps some as yet untried substance will end the quest.

Debridement.—This has been developed to a very high degree through experience gained in two world wars. It removes all dirty and devitalized tissue by en bloc excision, and has been responsible for a great lowering of mortality. It is not and will not be replaced by pressure irrigation, but, as pointed out later, the two may often be used together to the advantage of the patient.

IMPROVED METHOD

In my approach to this problem an effort was made to reduce it to its simplest terms. What is the problem? Simply this: Bacteria constitute the only real difference between a clean and a dirty wound. There were no bacteria in a badly lacerated arm or leg just before the injury—the tissues were clean. Right after the injury bacteria *are* present, having been carried in on pieces of foreign bodies, especially tiny particles that become deeply embedded quickly. The problem is the removal of the bacteria, which naturally calls for a thorough removal of all foreign particles, both large and small. Dead tissue, *if free from bacteria,* will do no harm aside from sloughing out later. In thinking over this problem, I recalled having once cleaned a small, dirty wound by irrigating it using a hypodermic needle and a 50 cc. syringe. The effectiveness of this tiny stream, driven into every crack and crevice of the area under some pressure, in dislodging every tiny particle had been very impressive. It was decided that if by some means one could likewise concentrate a battery of such fine streams, under pressure, in a given area, such an area would be more thoroughly and efficiently cleaned in far less time than by any other known method. A considerable amount of experimentation was carried out, and the following equipment* has proven satisfactory:

1. An ordinary air-duster gun, of the sort used in machine shops, is used, fitted with a special irrigator head (fig. 1).

2. This head is made from a piece of .5 inch brass rod, about 2 inches long, drilled out to within .125 inch of its distal end, which is drilled through with thirty holes made with a No. 73 jeweler's drill. These holes are tiny parallel tubes which direct the streams of water in parallel lines, concentrating all thirty streams in an area not more than .5 inch in diameter (fig. 2).

FIG. 1. Irrigator gun with special head and pressure tubing attaching it to water outlet. The "trigger" on the gun turns the water on and off; the wall valve regulates the amount of pressure.

3. Ordinary pressure tubing connects the irrigator gun to city water. At St. Joseph's Infirmary this water in the emergency room comes through the heater, is warm, and is at about 45 pounds pressure (fig. 1).

4. A drain box, 16 inches square, 4 inches deep, scalloped on each side, with a 1 inch side drain and a removable grill over the top are necessary equipment (fig. 2).

5. A large clear plastic or glass funnel is

*Designed and manufactured by the Corell Co., Houston.

useful to minimize the amount of spray deflected as the irrigator is used (fig. 2).

The pressure is varied according to the type of wound, and one learns to regulate this properly with use. From 35 to 40 pounds is about the maximum, and this is very efficient in cleaning compound injuries. A protruding bone end is more rapidly and efficiently cleaned by this method than by any other.

FIG. 2. Drain box with removable grill and side drain. Note the use of a glass funnel to prevent rebound of water. Note also the intense concentration of thirty fine streams in a small area.

Anesthesia, local, regional, or general, is used. The pressure irrigation is rather painful, but so is almost any method to some extent. Appropriate anesthesia is selected for each case.

Method of Use.—The injured part is placed on the grill, and the surrounding edges and area are thoroughly cleaned with soap and water and shaved. No attempt at this time is made to clean out the wound itself. If local anesthesia is chosen, it is injected to block the skin edges and any nerves within the depths of the wound. After injecting the anesthesia, the shaved area is pressure irrigated, the wound itself is thoroughly pressure irrigated, the edges are painted with a little antiseptic, sterile drapes are laid on the grill and about the now well cleaned wound and surrounding edges, and suturing is done without moving the patient from the grill.

In scalp wounds where the inner table is intact, this procedure not only thoroughly cleanses the wound itself, but will quickly remove all grease, dirt, and blood from the patient's hair, which ordinarily is quite difficult to accomplish.

Wounds of the hands and fingers of working men such as machinists are usually very hard to clean by other methods, but if the injury is reasonably recent it can be readily cleaned by pressure irrigation.

Extensive lacerations full of dirt and grit are readily and thoroughly cleaned in a minimum time. This type of injury has always required a great deal of time, but with this equipment it now requires a rather short length of time.

It is to be emphasized that no soap, scrubbing, or mopping within the wound itself is necessary: the battery of fine streams concentrated in a small area dislodge all foreign particles almost instantly, and scrubbing and mopping are both unnecessary and undesirable. Second, the force of the streams carries these foreign particles on out of the wound, and they are not just washed out of one part of the wound and allowed to settle in another. Third, a maximum amount of cleaning is accomplished in a minimum amount of time, an item of importance. Fourth, while the amount of water used is quite large, it is used with maximum efficiency. At 30 pounds pressure one uses a little less than a gallon a minute, and this gallon is broken up into thirty fine streams all concentrated in a small area.

In using water under pressure in this manner, there is a considerable amount of rebound of the streams. This is readily controlled by holding a 6 inch glass funnel upside down over the area being cleaned (fig. 2).

Again it should be emphasized that this method is not meant to replace debridement as the latter will always be irreplaceable under certain conditions. However, after one has thoroughly pressure-irrigated a wound, the dead tissue appears rather distinctly separated from the living, and I believe that any necessary debridement can then be more accurately done. Pressure irrigation as described herein is an adjunct to the present traumatic surgery armamentarium for cleaning up dirty wounds, but is no complete solution. It has certain advantages that become evident to one who uses it often—like everything else the user must become familiar with his instruments.

In summary, we have used this method at St. Joseph's Infirmary for more than two years in all types of injuries and have found it efficient and satisfactory. It is simple, extremely rapid, thorough, and no ill effects have been attributed to its use. I believe the principle of cleaning traumatic wounds by multiple fine-stream pressure irrigation is a

definite improvement over other existing methods.

1704 Crawford.

MANAGEMENT OF PROSTATIC SURGERY IN THE AGED

JAMES P. BRIDGES, M. D., F. A. C. S.
ABILENE, TEXAS

This report presents clinical data on 100 consecutive patients who were operated upon for the treatment of prostatic obstruction. Of the 100 operations, 83 were done by the transurethral route and 17 by the suprapubic route. Of the 83 patients operated on by the transurethral method, 5 had had preliminary cystotomy. Of the 17 suprapubic prostatectomies, 3 had one-stage operative procedure. Nine of the patients had previously been operated upon either by suprapubic prostatectomy or transurethral resection. Five had had previous transurethral resections and 4 had had open operations. The average age was 69.2 years, the oldest patient being 98 years of age. The greatest percentage of the patients operated upon were between the ages of 70 and 80 years. In the total 100 cases, the duration of symptoms was less than one year in 65 and from 1 to 3 years in the remaining group. The preliminary stay in the hospital before the operation was from less than one day to ten days. The postoperative hospitalization was on the average of seven days.

It has been a matter of considerable interest to me to observe the reaction of patients toward submitting to transurethral resection following a previous resection performed by me or elsewhere. In the 5 patients who had previously been operated upon by this method, there was none who expressed a fear of having the operation repeated at this time, whereas the patient who had had a previous open prostatectomy stated that he did not desire to have an operation with an incision but was quite anxious to have the transurethral route employed upon him. Of the 100 patients, 11 had bladder calculi associated with their enlarged prostate. The consensus is that vesical calculus does not constitute a contraindication to the performance of transurethral resection unless the calculi are excessively large size.

The quantity of tissue removed in the transurethral group varied from less than 3 Gm. to more than 75 Gm. Seven of the transurethral group had secondary resections five to eight days following the first operation. If the patient has a large gland and I am unable to take out sufficient tissue in from forty-five minutes to one hour, I think it better to do a second stage resection on him than to take a chance of possible surgical shock, complications, and so forth.

The operative and immediate postoperative mortality constitutes an important dictum in consideration of the merits of any operation. The mortality rate in these 100 consecutive cases was zero. I might add that I have followed these patients since their discharge. There have been 5 deaths in this total group since discharge from the hospital. One patient on whom resection was done five months ago died three weeks later with a carcinoma at the head of the pancreas. Another patient, age 84, died of myocardial failure two months after operation. The third patient died of pneumonia and senility five months after the operation. One patient died from cerebral embolus and cardiovascular renal disease two weeks after he returned to his home. The fifth patient died from coronary occlusion eleven months following operation.

Microscopic and pathological examinations of the tissue removed from the 100 patients revealed carcinomatous tissue in 11, ranging from grade 2 to grade 4. The 11 patients are now receiving stilbesterol, and 3 of this group have had bilateral orchidectomy.

Preoperative management of patients suffering from prostatism varies greatly. The patient's physical and mental condition, complications which have previous occurred, will dictate the procedures to be followed in each case. Generally speaking any patient who is ambulatory and free from such complications as renal insufficiency, cardiac decompensation, or sepsis may be operated upon without any preliminary treatment. But the majority of persons who require endoscopic prostatic surgery are not good risks. Because of their age they are subject to many of the degenerative diseases such as arteriosclerosis with or without hypertension and most of them are potential victims of coronary occlusion or cerebral accidents. Such accidents may occur at any time and any type of disturbance is likely to precipitate them. Especially true in regard to elderly persons is that the more efficiently, easily, and quickly the operation can be done and the smaller amount of anesthetic agent which can be used, the more successful the outcome will be. On admission to the hospital, if the patient does not seem to be an excessively good risk, catheter drainage is instituted and the blood chemistry and cardiovascular system are checked thoroughly. These patients are not advised to stay in bed unless they are desperately ill. It must

Read before the Stephens-Shackelford-Throckmorton Counties Medical Society, State Medical Association of Texas, Breckenridge, December 13, 1945.

be remembered that the older a person gets the poorer he tolerates bed rest. The patient is told just what his trouble is and the type of obstruction that he has present. The operative procedure is explained to him and he is told what to expect from his operation. Gaining the patient's confidence is of the utmost importance in this age group and he does appreciate an explanation of what it is all about.

I do not believe that cystoscopic examination should be routine procedure for the diagnosis of prostatism as the dangers of instrumentation which result from these procedures may in some instances outweigh any advantages which might be gained from their use. In doubtful cases the examination can be done in the operating room with a clear understanding that if the diagnosis of prostatism is confirmed a resection will be done under the same anesthesia. This procedure eliminates unnecessary examination and lessens the risk of injury to the patient who may have a comparatively feeble myocardium or an infected urine. As stated before, in the uncomplicated cases of prostatism it is better to submit the patient immediately to resection instead of making him undergo the preliminary period of catheterization. Nothing is more discouraging to a person than to have to wear a retention catheter for a considerable length of time. Beside the possibility of causing more infection the patient loses ground both from a mental and physical standpoint.

When the patient is ready for operation, my preoperative orders are 1.5 gr. nembutal the preceding night and 1/3 gr. pantopon and 1/150 gr. atropine the following morning before surgery. One hour following this medication, the patient is carried to surgery. The type of anesthesia is of topmost importance and cannot be stressed too greatly. In my experience the ideal anesthesia for transurethral resection is low spinal and sodium pentothal. The low spinal anesthetic blocks the lower sacral and pudendal plexuses; it produces a complete anesthesia confined to the perineum, the genitalia, and the bladder, and it extends to a point midway between the suprapubic and the umbilicus. It does not often produce motor paralysis of the lower extremities.

The technic of low spinal anesthesia is as follows: A 22 gauge spinal puncture needle with a 45 degree bevel tip is used for making the spinal tap at the level of the third or fourth interspace; a tap at the fifth interspace is made if possible, while the patient is sitting in the upright position. One-half ampule of ephedrine sulfate is given just before the spinal needle enters the canal. After the tap is done, 1 to 2 cc. at most is allowed to drip into an ampule containing 50 to 100 mg. of novocaine crystals. It must be remembered that there are three factors of major importance which regulate the level of anesthesia. First, the level of anesthesia is directly proportional to the volume of spinal fluid; second, the higher the level the larger the dose needed; and third, the greater the speed of injection the higher the immediate level. Therefore, after 2 cc. of spinal fluid is obtained and mixed with 100 mg. of novocaine crystals, from .5 cc. to .75 cc. is slowly injected into the epidural space and the spinal puncture needle withdrawn. After the spinal anesthetic has been given the patient is supported in the sitting position for a period of three minutes while the anesthetic agent becomes fixed to the nervous tissue below the level of the spinal tap. After this period has elapsed, the patient can be placed in the horizontal position and will not develop a higher anesthetic level. Extensive experience has demonstrated its safety. There is virtually no vasomotor collapse.

During the operative procedure it is well to watch the patient closely. If he complains of undue physical distress or mental anxiety an investigation as to the cause should be made immediately. As the anesthetic does not affect the lower extremities and since the patient's legs are held in a fixed and unnatural position for a long period of time, he may be made exceedingly uncomfortable by fatigue and cramping. This might, and can, constitute an additional operative insult that may substantially contribute to the precipitation of surgical shock. Therefore the patient's complaints during the surgery should not be disregarded, and he should be allowed to move his legs and change his position if he is uncomfortable. During the operative procedure I routinely give blood plasma or whole blood. The operation usually takes from twenty to sixty minutes. If I find I am unable to remove sufficient tissue in one hour's time I usually stop and plan to do a secondary resection seven days later. Hemorrhage is poorly tolerated by the aged. Therefore, it is necessary that there be complete hemostatis during all the operative procedure. The time to stop hemorrhage is on the operative table and not in the room one to six hours later. It has been demonstrated recently by clinical observation that sodium chloride or normal saline is poorly tolerated following hemorrhage or burns, whereas sodium lactate or bicarbonate solution or glucose may be administered with relative safety to patients suffering from recent hemorrhage. If fluids

are necessary I routinely use sodium lactate or Hartman's solution. I think parenteral administration of fluids is overdone and often it is this "occasional or extra jug of glucose or saline" that precipitates a chill followed by myocardial embarrassment and possibly death.

After the patient is returned to the room the catheter is irrigated with 1:10,000 silver nitrate. He is instructed to take deep breaths and move his extremities frequently. In this way atelectosis and pulmonary embolism are not encouraged. The following morning he is given a general diet and propped up in bed. He is allowed out of bed on the third postoperative day. The catheter is removed on the third to fourth postoperative day if he has no fever. If he can void without discomfort and has no residual urine, the patient is discharged on the seventh postoperative day. Urethral sounds are then passed every two to three weeks for sixty days and small doses of sulfathiazole are given if needed. It requires approximately six weeks for the excised area to heal.

1442 North Third.

PRIMARY CARCINOMA OF THE GALLBLADDER

FRANCIS J. KELLY, M. D.
Resident in Surgery
and
TERRELL SPEED, M. D.
Division of Surgery
TEMPLE, TEXAS

The first note in the literature concerning primary carcinoma of the gallbladder appeared in 1777 in a record by Stoll, of Vienna. The first large series was gathered in 1889 by Musser, who reported 100 cases. The present report includes the clinical and pathological data from 17 primary carcinomas of the gallbladder found at the Scott and White Clinic during 1,600 consecutive operations for diseases of the biliary tract. That this condition deserves repeated investigation is apparent when one considers that a correct preoperative diagnosis was made in this series in only 2 cases.

INCIDENCE

According to Kaufmann carcinoma of the gallbladder forms 5 to 6 per cent of all carcinomas.[3] Among the malignancies of the digestive organs carcinoma of the gallbladder is generally regarded as being preceded in frequency by malignancy of the stomach, colon, and anus.[1] In 1,600 consecutive operations for biliary tract diseases the 17 cases of primary carcinoma of the gallbladder represent an incidence of just over 1 per cent. This is slightly below the average incidence of between 0.5 and 6.5 per cent reported by various other authors.[2, 4, 6, 8] In the present series only those cases on which a definite gross diagnosis of carcinoma of the gallbladder was made at operation (2 cases) and those proven by microscopic study (15 cases) have been included. All cases of carcinoma of the bile ducts were excluded.

As in cancer of other organs the high incidence was in the older age group and ranged from 46 to 68 years with an average of 62 years. Sixteen of these patients were between 55 and 68 years. Ewing[3] reported the average age in his studies to be about 58 years. All patients in this series were white.

Carcinoma of the gallbladder is more common in women than in men. Ewing[3] stated

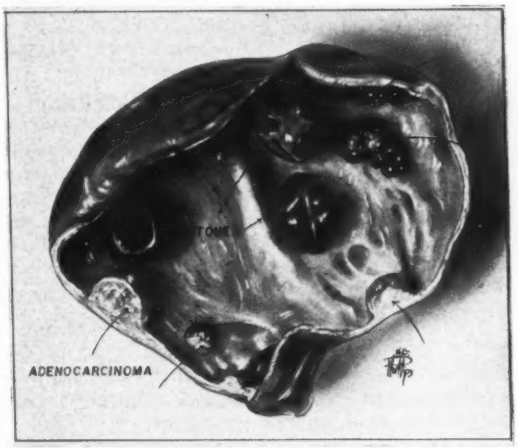


FIG. 1. Drawing of an operative specimen of a case of primary adenocarcinoma of the gallbladder.

that the ratio is 4 or 5 to 1. In a large series of consecutive autopsies, Van Zandt[10] reported an incidence of 77.7 per cent females. Boyce and McFetridge[1] gave the female incidence as 56 per cent. In this series there were 13 females and 4 males; a ratio of about 3 to 1, or 69.2 per cent.

STONES

Perhaps the most interesting phase of a study of carcinoma of the gallbladder is its relation to cholelithiasis. Though a causal relationship cannot be conclusively proved because of the difficulty experienced in reproducing the disease in animals, Mallory[7] has stated: "Cancer of the gallbladder, we know, almost invariably occurs in patients who have been chronic carriers of gallstones for ten or twenty years. It is the greatest danger of the so-called 'silent stone' in the gallbladder." According to Ewing[3] "mechanical irritation of calculi, the relation to

From Scott and White Clinic.

a peculiar form of lipoid metabolism (cholesterin), and the irritative and digestive action of bile seem to combine in producing the remarkable susceptibility of this mucous membrane to cancer." In this series 9 gallbladders were opened and all were found to contain gallstones. Only those gallbladders which were actually opened as a surgical or autopsy specimen were included because of the admitted difficulty with which stones may be palpated in a gallbladder infiltrated with carcinoma.

A comparison with other reported series is found in table 1.

TABLE 1.—*Percentage of Carcinomatous Gallbladders Containing Stones.*

	Per Cent
Musser[3]	69
Futterer[5]	70
Zenker[3]	85
Lam[5]	87
Massachusetts General Hospital[3]	88
Zanowski[3]	100
Peco, G., and Cipolla, E.[9]	100
Scott & White Hospital	100

The proportion of cases of cholelithiasis which develop cancer is variously estimated from 4 to 18 per cent.[3] It is obvious then that the mere presence of stones is not the sole etiologic factor. On the other hand, the persistent high incidence of stones in cancer of the gallbladder points to this as a definite contributing factor at least.

PATHOLOGICAL DATA

In the 15 cases available for microscopic study, adenocarcinoma alone occurred in 14 gallbladders. The remaining gallbladder was involved by a combined squamous cell carcinoma and adenocarcinoma.

The factor of visible metastasis was ascertained in 16 cases. The liver had carcinomatous involvement in 62.5 per cent; regional nodes in 19 per cent; ducts in 12.5 per cent; and omentum in 12.5 per cent. In 1 case, with general metastasis, the kidneys, lungs, and pancreas were involved.

Between the gallbladder and the liver the lymphatic system is abundant. In cases of carcinoma of the gallbladder, extension to the liver can occur with relative ease. This accounts for the minimal chances of cure unless the patient is brought to surgery early in the course of the disease. Regional lymph nodes are frequently involved but because of the technical difficulty usually encountered they do not become a surgical problem.

CLINICAL PICTURE

As one might expect in view of the relatively high incidence of calculi and the obstructive nature of the tumor, the history in most of these cases was one of upper abdominal pain (82 per cent), recent gaseous indigestion (53 per cent), chronic gaseous indigestion (47 per cent), loss of weight (45 per cent), awareness of a mass in the abdomen (35 per cent), jaundice (35 per cent), and acholic stools (18 per cent).

As in all reported series, pain is the outstanding complaint. In this series about half the cases gave evidence of previous biliary tract disease, the history of dyspepsia or biliary colic, or both, going back as much as forty-five years. In the other half of these cases, no previous history suggestive of cholecystic disease was elicited and the terminal symptoms had their onset from two to twelve weeks prior to admission.

Reference to table 2 reveals the incidence of the recorded chief complaints at the time of admission.

TABLE 2.—*Incidence of Chief Complaints on Admission.*

Chief Complaint	Incidence (Per Cent)
Pain	71
Mass	24
Jaundice	18
Gaseous indigestion	12
Miscellaneous	29

Four physical findings occurred with the greatest frequency: upper right abdominal tenderness (53 per cent), palpable tumor in the right upper abdomen (47 per cent), jaundice (41 per cent), and liver enlargement (29 per cent).

The following case report is presented because it seems to typify the general observations in a case of carcinoma of the gallbladder from this series.

CASE REPORT

A white woman, age 67, was admitted to the hospital with a chief complaint of weight loss and jaundice. The history revealed that for a ten year period between the ages of 22 and 32 she had had severe recurrent attacks of acute indigestion. The interval history was otherwise noncontributory. The present illness, beginning about three months prior to admission, consisted of slight gaseous indigestion, anorexia, and gradual loss of weight. Five weeks later the weight loss became more rapid. Her physician at that time noted a faint jaundice. In spite of symptomatic treatment, her relatively painless jaundice developed more completely and the patient noticed acholic stools. There had been no vomiting but anorexia had become marked a few days before admission.

Physical examination revealed a markedly jaundiced patient showing the effects of her recent weight loss of 25 pounds in three months. Temperature, pulse, and respiration were normal and blood pressure was 140 systolic, 80 diastolic. The liver edge was felt to be about 4 cm. below the right costal margin. In the right upper quadrant near the midline was a fullness suggestive of a mass. This was not tender to palpation. Urinalysis and serologic studies revealed nothing pertinent. The erythrocyte count was 4,000,000. The leukocyte count numbered 9,650 with a normal differential count. Hemoglobin was 80 per cent and prothrombin time was 55 per cent of normal. The direct Van den Bergh reaction on serum was positive and the quantitative indirect reading was 12.3 mg. per 100

cc. Roentgenograms of the stomach, chest, and colon were negative. The gallbladder film without dye disclosed a large primary gallbladder shadow with small stones. Following adequate preparation for six days the patient came to operation.

The regrettable conditions so often encountered in this type of case were exemplified here. The gallbladder was infiltrated with hard carcinomatous nodules extending into the cystic duct. Several nodules about 1 cm. in diameter were found in the left lobe of the liver. The pancreas was small and soft. A biopsy specimen from the gallbladder, studied by the quick-section method, was reported to be a high grade adenocarcinoma. Additional study after fixation confirmed this report and a microscopic diagnosis of adenocarcinoma of the gallbladder, grade III, completed the report. With the evidence from the quick-section, the condition of the gallbladder and metastasis to the liver, it was decided to limit the operative procedure to this exploration and the abdomen was closed. Convalescence was uneventful though the patient's anorexia and rather marked jaundice continued. She was discharged on the twenty-fourth postoperative day to the care of her family physician. Follow-up revealed that the patient died ten days after leaving the hospital.

LABORATORY DATA

It is generally agreed that the roentgenogram offers little assistance in the diagnosis of malignancy of the gallbladder although benign tumors are reported with some degree of accuracy. The roentgen diagnoses in this series are tabulated in table 3.

TABLE 3.—*Roentgen Studies.*

Type of Roentgenogram	Total Number of Cases	Diagnosis	Number of Cases
Gallbladder visualization	5	Nonfunctioning gallbladder	5
Flat plate	10	Upper right side soft tissue mass	4
		Negative	4
		Probable stones in gallbladder	2

Clinical laboratory findings were not constant nor did they reveal any specific information which might lead to a correct diagnosis.

DIAGNOSIS AND OPERATIVE PROCEDURE

In 2 cases a diagnosis of carcinoma of the gallbladder was made preoperatively. Diagnoses, in order of relative frequency, included cholecystitis with cholelithiasis, cholecystitis, upper right abdominal carcinoma, carcinoma of the pancreas, carcinoma of the gallbladder, right kidney tumor, carcinoma of the cecum, and hydrops of the gallbladder.

Unless the possibility of carcinoma is kept in mind in biliary tract disease, it is apparent that the diagnosis will rarely be made. This is regrettable as the only hope for cure lies in very early diagnosis. That this is true is exemplified in this series, for in 7 patients exploratory laparotomy was the limit of surgical intervention. Two patients received cholecystostomy while 2 died before operation could be attempted. In 1 patient cholecystogastrostomy was performed because of extension into the common duct. In 5 patients cholecystectomy was possible. A drawing of a specimen from 1 of these cases is shown.

SUMMARY

1. Seventeen cases of primary carcinoma of the gallbladder found during 1,600 consecutive operations for diseases of the biliary tract are presented. This represents an incidence of about 1 per cent.

2. The average age is 62 years. The ratio of males to females is about 1 to 3.

3. Of the gallbladders actually opened, 100 per cent contained one or more stones.

4. Pathologic study revealed that all were adenocarcinomata.

5. The liver and regional nodes are most frequently involved.

6. The onset is insidious, but pain, jaundice, gaseous indigestion, and loss of weight are relatively constant symptoms.

7. The prognosis in carcinoma of the gallbladder is poor and hope for cure lies in early operation.

8. A typical case is reported.

REFERENCES

1. Boyce, F. F., and McFetridge, E. M.: Carcinoma of the Gallbladder, Internat. S. Digest 21:67, 1936.

2. Erdmann, J. F.: Incidence of Malignancy in Diseases of the Gallbladder, Am. J. Obst. 80:618, 1919.

3. Ewing, J.: Neoplastic Diseases, ed. 4, Philadelphia, W. B. Saunders Company, 1940, p. 753.

4. Judd, E. S., and Baumgartner, E. J.: Malignant Lesions of the Gallbladder, Arch. Int. Med. 44:735, 1929.

5. Lam, C. R.: The Present Status of Carcinoma of the Gallbladder, Ann. Surg. 111:403 (March) 1940.

6. MacCarty, W. C.: The Frequency of Strawberry Gallbladder, Ann. Surg. 69:131, 1919.

7. Mallory, T.: Clinicopathological Conference, New England J. Med., 225:880, 1941.

8. Marshall, S. F., and Morgan, E. S.: Carcinoma of the Gallbladder, S. Clin. North America 18:687 (June) 1938.

9. Peco, G., and Cipolla, E., quoted by Waters, C. A., and Kaplan, I. I.: 1945 Year Book of Radiology, Chicago, Year Book Publishers, p. 417.

10. Van Zandt, I. L.: Carcinoma of the Gallbladder, Texas State J. Med. 36:616 (Jan.) 1941.

11. Warren, R., and Balch, F. G., Jr.: Carcinoma of the Gallbladder, Surgery 7:657 (May) 1940.

NEW DERMATOLOGY AND SYPHILOLOGY JOURNAL

The publication of a new journal, the *Quarterly Review of Dermatology and Syphilology*, has been announced by the Washington Institute of Medicine, Washington, D. C. This new publication is the tenth in the Washington Institute's group of quarterly reviews covering specialized fields of practice. It will survey all published material on dermatology and syphilology appearing anywhere in the world from January 1, 1946, onward, and will be the first review journal in its field to provide this complete coverage.

Donald M. Pillsbury, M. D., will be editor-in-chief, with Herman Beerman, M. D., and Clarence S. Livingood, M. D., as associate editors. The editorial board includes more than thirty specialists from universities and medical centers throughout the world, and additional acceptance to invitations for membership on the board, principally from other countries, are expected.

FUNGUS INFECTIONS OF THE CORNEA

CASE REPORT OF KERATOMYCOSIS DUE TO MONILIA

E. M. SYKES, M. D.
SAN ANTONIO, TEXAS

Keratomycosis due to the mold Aspergillus fumigatus was first described by Leber in 1879. This case concerned a farmer who sustained an injury to his eye from the husk of an oat grain. The second case was reported by Berliner (1882) and later was described more fully by Uhthoff. A 23 year old farmer's eye was injured by a falling pear, followed by a very chronic ulcerative keratitis. In both cases it seemed apparent that the foreign body producing the injury had also carried the fungus. Fuchs[11] reported a case in a miller who had returned to his work before a herpes corneae febrilis had completely healed. Presumably the fungus was carried to the affected eye by grain dust, which filled the surrounding air. Other cases followed by Uhthoff and Axenfeld (1896-97), Schirmer (1896), Nobbe (1898), Wicherkiewicz (1900), Markow (1900), Kayser (1903), Buchanan (1903), Johnson (1903), Marlin (1905), Zade (1907), Hayano (1910), Orlow (1913), Lindner (1913), Gruter (1914), Castroviejo and Urra,[5] Fede (1930), and others.

A mycotic infection of the cornea is rarely seen, especially in cold climates. Kanerva[15] reported a case of keratitis Aspergillina and stated that it was the only one which had been described up to that date in Scandinavian countries. It is of interest that most of the cases reported give a history of trauma by some vegetable or earthy material, the foreign body presumably carrying the fungus. On the other hand, Fazakas found fungi in 25.65 per cent of normal eyes and 37 per cent in diseased eyes, which makes one think of the possibility of a secondary mycotic invasion following trauma to the corneal tissue.

After injury by the foreign body, a gray cloudiness appears with a dull, dry crumbling surface, around which develops a sharply defined line of demarkation usually yellowish in color. This line deepens very slowly into a gutter. Finally the slough is cast off, leaving an infiltrated ulcer. The active stage may be associated with iritis and hypopyon (Duke-Elder[7]). Perforation is very rare but can occur (Castroviejo and Urra[5]). The ulcerative process is very slow and chronic. The pain may be slight or very intense. If the lesion is situated near the limbus, the lesion may take on a less serious form and may resemble a fascicular keratitis when vascularization sets in. A microscopic examination of the slough will show a rich permeation of the mycelium which forms a network of fibers. Schirmer (1896) and others have examined whole eyes and found the area of the cornea around the slough densely infiltrated with a ring of leukocytes, while the iris and ciliary body were infiltrated with round cells. Very rarely does the fungus penetrate the inner eye and invade the vitreous.

The treatment recommended is the removal of the slough and cauterizing the site with galvano cautery. The Italian authors recommend large doses of potassium iodide

FIG. 1. Case of keratomycosis (Monilia albicans). Retouched photograph showing appearance of ulcer three days after initial trauma.

in addition to local treatment. A dense leukoma is generally the result if cautery is used. Surgical methods such as paracentesis of the cornea and delimiting keratotomy are not advised. Wurdemann[20] advises that in grave cases with hypopyon, one must abstain from all hasty intervention, as corneal section or the cautery, which may entail irreparable lesions, while the regressive phase of the process may speedily come about and end in cure with comparatively slight changes in the cornea.

Another very rare fungus infection of the cornea is caused by streptothrix actinomycosis. The lesion produced is similar to that caused by the Aspergillus. Cases have been reported by de Bernardinis (1904), Lowenstein (1910-14), Calderaro (1913), Davids (1921), and Zurnedden (1907). Other rare infections caused by fungi have been reported: Cavara[6] described a case of keratitis caused by the mold Mucor; a case of botryomycosis of the cornea reported by Bargeton (1905); cases of Glenospora graphii by

Accepted for publication February 1, 1946.

AUTHOR'S NOTE.—A bibliography of 104 references pertaining to fungus infections of the cornea has been compiled and on request will be made available to any library or researcher in this field.

Morax (1910); Vuillemin (1912); and Wright (1929). The lesion is an indolent ulcer with a dry necrotic base, a sharp gutter of demarkation, and a hypopyon. Fazakas[10] described an interesting case caused by Periconia.

Yeast infestions are exceedingly rare. Stoewer[19] and Lundsgaard[17] reported a very chronic ulcerative hypopyon keratitis due to yeast. Stoewer reported 2 cases of corneal ulcer from which pure cultures of yeast (Rosahefe) were recovered. One case was that of a 45 year old miner, the other of a 52 year old married woman. Lundsgaard's case concerned a 35 year old wooden shoemaker. Pure cultures of yeast were obtained from a very stubborn ulcer of the cornea. Although yeasts are the most widespread of

FIG. 2. Retouched photograph showing extent of ulceration and resultant nebulous scar two months after initial onset of keratomycosis (Monilia albicans).

fungi, being common in the soil and atmosphere, the eye is rarely the seat of any lesion caused by them. Blastomycosis (Monilia) of the conjunctiva is very rare and is generally secondary to infections of the skin of the face and lids and of the lungs (McKee[18]). Busse[4] reported finding Monilia in a corneal ulcer. Dr. D. A. Todd, pathologist with the Nix Hospital Clinical Laboratory, San Antonio, in a personal communication, reported having accidentally recovered a Monilia albicans from a lesion located in the cornea near the limbus. This ocular lesion was found in a U. S. Army nurse on duty in a Belgium hospital in 1944. It is possible for small mycotic lesions of the cornea to heal spontaneously without the true nature of the causative agent ever being suspected, hence the value of bacteriological examinations in all cases of ulcerative keratitis.

The local treatment should be mild; galvano cautery, drastic surgery, and deeply penetrating caustics should be avoided, for the resultant scarring will be unnecessarily dense and resultant complications may be serious. Large doses of potassium iodide are as efficacious in yeast infections of the cornea as in similar infections in other parts of the body.

CASE REPORT

C. V. B., a white man, age 31, felt something hit his left eye while he was riding in an automobile. Three days later he sought medical aid because of severe ocular pain.

He was first seen April 12, 1939. The left eyeball appeared very red from a marked ciliary and conjunctival injection. A linear dendritic type of ulcer was observed running vertically through the center of the cornea, extending 3 mm. from the limbus at 1 o'clock to 4 mm. from the limbus at 4 o'clock. The ulcer was irregularly scalloped along the edges and was not more than 2 mm. wide. The pupil was contracted and the iris markings appeared slightly blurred. A bio-microscopic examination did not show the presence of any foreign body, but revealed that the ulcer was shallow, the edges being slightly undermined with a narrow edge of corneal infiltration. The floor appeared shallow and seemed to be covered with a thin, grayish, dry membrane, firmly adherent to the underlying corneal tissue. There was some increase of corpuscles in the aqueous humor but no hypopyon was evident.

The vision of the right eye was 20/20, while that of the affected eye was 20/50. Wassermann and Kahn tests were negative. Early laboratory examinations revealed scanty growths of a staphylococcus hemolyticus.

There was no history of malaria nor was there any past history having any bearing upon the ocular condition.

The ulcer was first treated by the local application of absolute alcohol; then a few days later by pasteurization. Atropine and dionin were prescribed, and butyn ointment was used for the pain, which was excessive. Sulfanilamide was administered internally, 60 gr. per day for four days. The ulcer was stained with mercurochrome and ultraviolet radiation via a quartz rod was applied locally every five days. The ulcerative process became more extensive. The patient was hospitalized and given typhoid vaccine intravenously while a bacteriophage solution was instilled into the conjunctival sac daily. On May 4, scrapings were taken from the ulcer and sent to the laboratory for further study. The ulcerative process had by this time extended almost to the limbus on the temporal side, pain and tearing being severe and persistent. Treatment by swabbing the ulcer with tincture of iodine, as suggested by consultants, was also ineffective. On May 16, Dr. D. A. Todd reported finding a Monilia albicans growing on Sabouraud's media. With the exception of atropine and dionin, all local medication was stopped and large doses of a saturated solution of potassium iodide (90 drops daily) were administered. Within a week the pain had subsided, and in two weeks all acute inflammatory symptoms had disappeared. The resultant scarring of the cornea was limited to the upper layers. Bowman's membrane was broken through in many places but the invasion of corneal tissue was not profound. Hypopyon was never evident. The extensive lesion involving nearly one-half of the cornea was not completely cicatrized until July, 1939. The final vision was 20/40 not corrected by lenses.

A diagnosis of Monilia albicans infection involving a dendritic type of corneal ulcer, probably traumatic in origin, was based on: (1) the clinical appearance; (2) the stubborn, chronic, progressive course in spite of persistent treatment usually effective in corneal ulcers; (3) the laboratory report of Monilia albicans obtained from corneal scrapings; and (4) the immediate beneficial effects of the in-

ternal administration of potassium iodide in large doses.

REFERENCES

1. American Encyclopedia and Dictionary of Ophthalmology, ed. C. A. Wood: Chicago, Cleveland Press, 1913-21, vol. 9, p. 6831.
2. Baquis, E., and Cardone: Una nuova forma di cheratomicosi, Ann. di ottal., Pavia, 34:945-946, 1905.
3. Busse, O.: Die Hefen als Krankeitserreger, Berlin, A. Hirschwald, 1897.
4. Busse, O.: Ueber parasitäre Zelleinschlüsse und ihre Züchtung, Centralbl. f. Bakt., 16:175-180, 1894.
5. Castroviejo, R., and Munoz Urra, F.: Aspergilosis ocular, Arch. de oftal. hispanoam. 21:453-484 (Sept.) 1921.
6. Cavara, V.: Una forma nuova di cheratomicosi (cheratomicosi mucorina), Ann. di ottal., Pavia, 42:650-674, 1913.
7. Duke-Elder, W. S.: Text-book of Ophthalmology, St. Louis, C. V. Mosby Co., 1933-41, vol. 2, pp. 1661 and 1941-1944.
8. Ellett, E. C.: Aspergillar Keratitis, Ophthal. Rec. 11:582, 1902.
9. Fazakas, A. S.: Ueber Pilzerkrankungen der Hornhaut, Klin. Monatsbl. f. Augenh., 106:56-63 (Jan.) 1941.
10. Fazakas, A. S.: Periconic Keratomycosis, Magyar orvosi arch., 35:332-336, 1934.
11. Fuchs, E.: Keratomykosis Aspergillina, Wien. klin. Wchnschr., 7:305-307, 1894.
12. Grandi, G.: Cheratomicosi Aspergillina nodulare atipica, Boll. d'ocul., 13:1001-1015 (Aug.) 1934.
13. Greeff, R.: Die pathologische Anatomie des Auges, Berlin, A. Hirschwald, 1902-06, pp. 152-155 (Ergänzungsband I, 2te Lieferung, in: Orth, J.: Lehrbuch der speciellen pathologischen Anatomie.)
14. Guy, W. H., and Jacob, F. M.: Unusual Skin and Mucous Membrane Lesions Apparently Due to a Yeast, Arch. Dermat. & Syph., 14:592 (Nov.) 1926.
15. Kanerva, A.: Ein Fall von Keratitis Aspergillina, Acta ophth., 10:376-381, 1932.
16. Keiper, G. F., and Burrage, S.: Yeast Cells As a Probable Cause of Ulcerative Keratitis; Preliminary Report, J. A. M. A., 49:210-211 (July 20) 1907; abstr.: Ophthal. Rec., 16:333, 1907.
17. Lundsgaard, K. K. K.: Ein Fall von Hypopyonkeratitis mit Reincultur von Hefe, Klin. Monatskl. f. Augenh., 38:13-19, 1900.
18. McKee, S. H.: Blastomycosis of the Eye, Arch. Ophth., 3:301-305 (March) 1930; Canad. M. A. J., 22:501-503 (April) 1930.
19. Stoewer: Ueber die Wirking pathogener Hefen am Kaninchenauge, Arch. f. Ophth., Leipzig, 48:178-191, 1899.
20. Würdemann, H. V.: Injuries of the Eye; Diagnosis and Treatment; Forensic Procedures and Visual Economics, ed. 2, St. Louis, C. V. Mosby Co., 1932, p. 445; London, Henry Kimpton, 1932.

1609 Nix Professional Bldg.

EFFECTS OF EXTREME COLD

Extreme or prolonged cold tends to clot red blood cells so that they plug the circulation, eventually resulting in development of gangrene and loss of limbs. This fact has been established, according to the Surgeon General's office, by study of pathologic tissue from overseas soldiers and experiments with rabbits in which limbs were subjected to temperatures of minus 30 C.

The condition became of great importance in the European theater during the last war. Air crews subjected to extreme temperatures four or five miles over the clouds found that exposure of even a minute or so might result in the loss of a finger. Infantrymen who stayed days at a time in foxholes filled with slush and icy water suffered unbearable pain and inability to walk when relieved from duty, and persistence of the disability and loss of toes were not infrequent.

Major Nathan B. Friedman, of the Army Institute of Pathology, has recently reported on the samples of pathologic tissue. Several varying effects of cold were noted, but in all cases were found the red blood cell plugs which had stopped circulation. The rabbit experiments by Dr. Hurt Lange and David Weiner, of the New York Medical College, working with the Institute of Pathology, revealed the same results. The clotting could be prevented in the rabbits, however, by injections of heparin. Treated rabbits seemed little worse off when their legs were thawed.—S. G. O. Notes, July 31, 1946.

AN EPIDEMIOLOGICAL INVESTIGATION OF TYPHUS FEVER IN TEXAS, 1943-1945

J. V. IRONS, Sc. D., and GEORGE W. COX, M. D.*
AUSTIN, TEXAS

Typhus is a problem primarily of the southern United States although cases are occasionally recognized far to the north. In 1945, the 1,833 cases of typhus fever reported in Texas accounted for more than one-third of the 5,167 cases reported throughout the United States. Many cases are undiagnosed or unreported and it is conservative to estimate that 3,000 cases of typhus actually occurred, rather than the 1,833 cases which were reported in 1945.

Distribution of typhus cases reported, 1941-1945, in Texas is shown on figure 1. The comparative incidence in relation to recent yearly totals for the entire United States is shown in table 1.

While, according to Bohls,[1] typhus was first recognized in the middle and lower Rio Grande area, the disease has been reported with increasing frequency over much of the state. In 1927, only 25 cases were reported, but in 1934, 465 cases were reported. In 1942, 1,204 cases were reported and 60 deaths were charged to typhus. Of the 254 counties in Texas 180 had reported typhus by 1946. The remaining counties are mostly in west Texas where the population is scattered or reporting of communicable diseases is unsatisfactory.

While typhus is endemic in nearly every sector of Texas, cases tend to be sporadic and sometimes the infection appears to remain dormant for years, as suggested by figure 2. Most cases occur in the summer months and a peak is usually reached in July or August, as shown in figure 3.

TABLE 1.—*Comparative Incidence of Typhus In Texas and the United States.*

Year	Texas Totals	United States Totals
1942	1,204	3,720
1943	1,452	4,533
1944	1,740	5,352
1945	1,833	5,180
1946, First Quarter	202	576

Males are infected slightly more often than females, as shown in table 2. It is noticeable that typhus appears to be less common in Negroes.

TABLE 2.—*Distribution of 525 Cases of Typhus by Sex and Color, 1943-1945.*

MALES			FEMALES		
White	Negro	Total	White	Negro	Total
286	16	302	212	11	223

*Associate Director of Laboratories and State Health Officer, respectively, Texas State Department of Health.

Read before the Section on Public Health, State Medical Association of Texas, Annual Session, Galveston, May 8, 1946.

All ages are susceptible but the disease is at least less commonly recognized in children. The distribution of cases by age group is shown in table 3.

TABLE 3.—*Distribution of 503 Cases by Age Group, 1943-1945.*

Age Group	No. Cases
0-10	25
11-20	94
21-30	83
31-40	96
41-50	100
51-60	47
Above 60	58

The severity of infection shows considerable variation. While death from typhus is uncommon, the illness frequently is severe, particularly with old persons among whom death most often occurs. The onset usually is rather sudden and in many instances the illness is ushered in with chills. The patient nearly always complains of headaches and other body pains. Constant fever usually persists about two weeks. The temperature peaks are variable but tend to reach or exceed 103 F., and peaks of 104 F. or more are not uncommon. The rash is macular in character and appears first on the chest, back, or abdomen, in most instances four or five days after onset. Later the extremities may become involved. The spots tend to be evanescent and often are not observed.

Laboratory aids are of great value in the diagnosis of typhus fever. While the serum agglutination test, frequently known as the Weil-Felix test, with patient's serum has long been known to be of great value, the complement-fixation test employing the patient's serum is even more reliable and also permits differentiation of typhus and spotted fever. Unfortunately, the titers with either test are unlikely to reach high levels before the beginning of the second week of illness and repetition of the test is frequently necessary in order to detect significant titer changes.

In searching for a source of infection, results of laboratory tests on rats or their fleas taken at the patient's home or place of work have proved very helpful. It is not at all unusual to find the focus of infection for several cases to be a feed store, grocery store, meat market, barn, or a rat-infested residence. Other foci may be present.

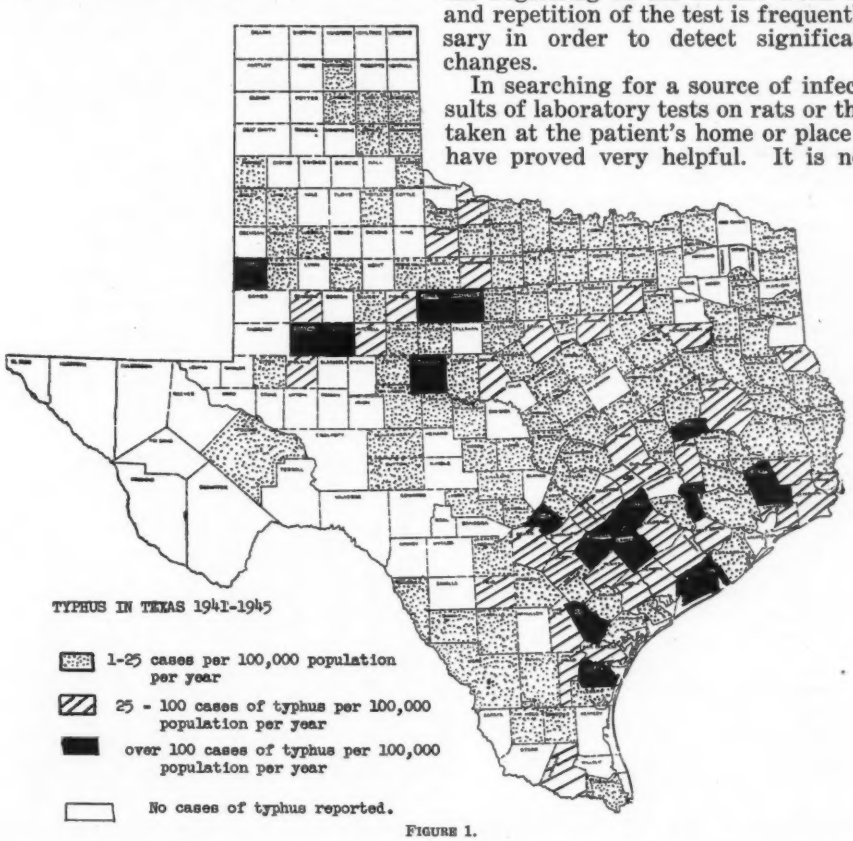

TYPHUS IN TEXAS 1941-1945
1-25 cases per 100,000 population per year
25 - 100 cases of typhus per 100,000 population per year
over 100 cases of typhus per 100,000 population per year
No cases of typhus reported.

FIGURE 1.

The results of a rat serological survey at Austin in 1945 are given in table 4.

The tropical rat flea appears to play the major role in transmission of typhus from rat to rat or from rat to man, but other fleas

and perhaps rat lice or other ectoparasites play a part. The results of typhus tests on rat ectoparasites taken at Austin in 1945 are shown in table 5. It should be noted that this tabulation shows all pools of lice negative for typhus; however, in tests elsewhere evidence of typhus in rat lice has been found.

TABLE 4.—*Places Surveyed for Typhus at Austin, Texas, in 1945.*

Number places sampled	23
Number places positive	18
Per cent positive	75%
Number rats tested	68
Number rats positive	26
Per cent positive	38%

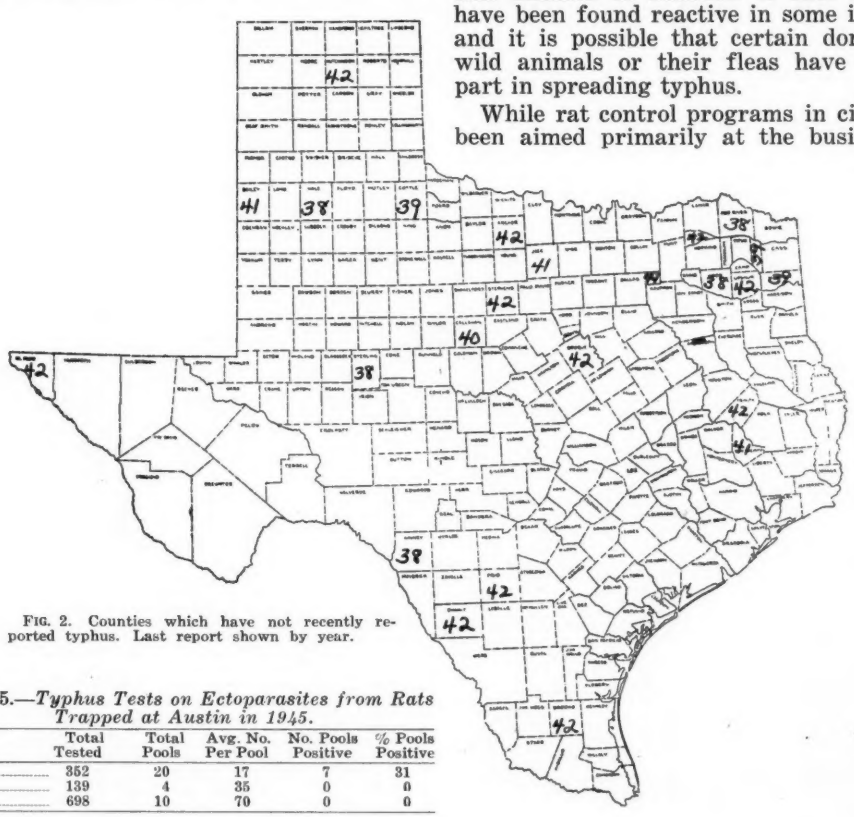


FIG. 2. Counties which have not recently reported typhus. Last report shown by year.

TABLE 5.—*Typhus Tests on Ectoparasites from Rats Trapped at Austin in 1945.*

	Total Tested	Total Pools	Avg. No. Per Pool	No. Pools Positive	% Pools Positive
Fleas	352	20	17	7	31
Lice	139	4	35	0	0
Mites	698	10	70	0	0

TABLE 6.—*Results of Blood Tests on Rats in Texas in 1945.*

Area of State	No. Tested	Total No. Positive	% Positive
South Texas	135	89	65
Southeast Texas	184	105	57
Southwest Texas	33	19	57
East Texas	41	14	34
Central Texas	107	54	50
West Texas	11	4	36
Total	511	285	55

Surveys of murine typhus based on laboratory tests of rat blood or rat fleas in several communities in Texas, as conducted by the Texas State Health Department, suggest in many localities that the majority of adult rats have been or still are infected. This is brought out in table 6, which summarizes results with complement-fixation tests on rat bloods in several Texas towns and cities.

During the past year typhus in house mice has been found repeatedly. However, blood tests on mice have given a definitely lower ratio of positive reactors than with rats.

Fleas carrying typhus have been found on opossums and puppies,[6] and again on kittens as previously reported.[5] Blood tests on certain animals in addition to rats and mice have been found reactive in some instances, and it is possible that certain domestic or wild animals or their fleas have a minor part in spreading typhus.

While rat control programs in cities have been aimed primarily at the business districts, there is growing evidence of the importance of typhus in residential areas. Bowman[2] has reported that while the rat stoppage program in the Corpus Christi business district was considered a success, nevertheless this did not suffice to control typhus in the city. A good proportion of cases in Austin and San Antonio in recent years have also been traced to residential areas. Attention also has been called to the prevalence of typhus on the farms in many south Texas

communities. It seems evident enough that more attention must be given to control of typhus in residential areas of cities as well as in the business districts, and also on the farms.

Davis[3] has reported that DDT dusting of rat runs is effective in lowering the rat flea index. Based on the report by Davis[3] and reports[9] of results of research particularly in Lavaca County, the Texas State Health Department is employing DDT dusting of rat runs followed by poisoning, particularly with 1080, for typhus control. The economic losses charged to rats and hazard from plague and other rat-borne diseases necessitate long range plans to hold rats and their fleas at a minimum.

Observations on the possible value of typhus vaccination are of great interest. The State Health Department in its Hallettsville project in Lavaca County at the present time

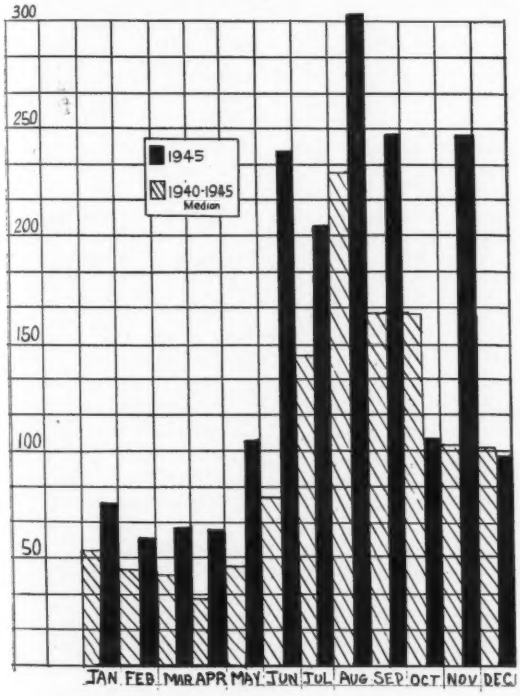


FIG. 3. Monthly incidence of typhus fever in Texas.

is attempting to evaluate vaccination as a control procedure.[9] The State Health Department is indebted to both Dr. H. R. Cox, Director of Virus Research, Lederle Laboratories, and Dr. M. Ruiz Castaneda, Typhus Research Laboratory, Hospital Generale, Mexico City, for grants of liberal quantities of typhus vaccine for field and laboratory investigations. Other than that these vaccines stimulate the rapid appearance of complement-fixing antibodies, no conclusive statement regarding immunizing capacity for man is warranted; however, the work has been going long enough with the Cox-type vaccine to suggest that this vaccine is of protective value. Both the Cox- and Castaneda-type vaccines give considerable protection experimentally for laboratory animals and should be of value for human protection.

DISCUSSION

The public health importance of typhus in Texas is evident when one realizes what a big fraction of the total number of cases reported in the United States the Texas cases represent. There can scarcely be any doubt that the apparent spread of typhus fever in Texas in recent years is real. However, better recognition and reporting of the disease has unquestionably accounted for some of the apparent increase in prevalence. Increased attention to laboratory confirmation by means of the Weil-Felix test and, more recently, the complement-fixation test has been helpful to many physicians in making sure of the diagnosis.

Both Meleney[7] and Topping and Dyer[10] have commented on the apparent recent extension of typhus in the United States. The role of rats and their fleas as the fundamental source of infection is well established, through the work of Mooser, Castaneda, and Zinsser[8] and Dyer, Rumreich, and Badger.[4] Our[5, 6] findings of infected fleas on kittens and opossums suggests that perhaps other ectoparasites or other animals may have at least a minor role at times in the economy of typhus rickettsiae.

Since typhus preëminently is a disease associated with the rat and its fleas, it is evident that control measures should be directed against the rat and its fleas. In areas where rat control cannot be accomplished it is possible that vaccination would be useful, if it should be shown conclusively that vaccination is effective in reducing both severity of infection and actual typhus morbidity.

SUMMARY

In 1945, the 1,833 cases of typhus fever reported in Texas accounted for more than one-third of all such cases reported in the United States.

This disease either has been spreading rapidly or has been increasingly recognized in Texas.

Recent surveys have indicated that a high percentage of rats in many Texas communities have harbored this infection.

Poisoning of rats with 1080 after dusting

of rat-runs with DDT is a relatively new but promising control procedure.

Typhus vaccination is also a promising control procedure.

REFERENCES

1. Bohls, S. W.: Typhus Fever in Texas, South. M. J. 28: 1162-1165 (Dec.) 1935.
2. Bowman, C. R.: Corpus Christi-Nueces-Kleberg Counties Health Unit Typhus Fever Control Program, J. Texas Pub. Health A. 4:45-46, 1945.
3. Davis, D. E.: The Control of Rat Fleas (Xenopsylla) by DDT, Pub. Health Rep. 60:485-489 (May 4) 1945.
4. Dyer, R. E.; Rumreich, A.; and Badger, L. F.: Typhus Fever, A Virus of the Typhus Type Derived from Fleas Collected from Wild Rats, Pub. Health Rep. 40:334-338 (Feb. 13) 1931.
5. Irons, J. V.; Bohls, S. W.; Thurman, D. C., Jr.; and McGregor, T.: Probable Role of the Cat Flea, *Ctenocephalides felis*, in Transmission of Murine Typhus, Am. J. Trop. Med. 24:359-362 (Nov.) 1944.
6. Irons, J. V.; Beck, O.; and Murphy, J. K., Jr.: Fleas Carrying Endemic Typhus Rickettsiae Found on Nonmurine Hosts, Am. J. Bact. 51:609-610 (May) 1946.
7. Meleney, H. E.: Recent Extension of Endemic Typhus Fever in the Southern United States, Am. J. Pub. Health 31: 219-227 (March) 1941.
8. Mooser, H.; Castaneda, M. R.; and Zinsser, H.: Rats as Carriers of Mexican Typhus Fever, J. A. M. A. 97:231-233 (July 25) 1931.
9. Narrative and Progress Reports, Lavaca County Typhus Research Unit, Texas State Department of Health, 1945.
10. Topping, N. H., and Dyer, R. E.: Apparent Recent Extension of Typhus in the United States, Am. J. Trop. Med. 23:37-42 (Jan.) 1943.

TEAMWORK IN CANCER CONTROL

J. LOUIS NEFF

Executive Director, American Cancer Society, Texas Division

HOUSTON, TEXAS

Cancer can neither be diagnosed nor treated successfully without coöperative effort. Probably no other disease requires so much coöperation from so many people and from such a variety of people as does this number two cause of death.

The commonly accepted dictum "no cancer diagnosis is complete without pathologic confirmation" immediately establishes the idea of the "team" in diagnosis. The patient usually is first seen by the family physician, a general practitioner. If cancer is suspected, help must be sought from one or more of the specialist group. The general surgeon or the surgeon in some special field, the roentgenologist, and finally the pathologist and his technician, all are called upon to play a part. This teamwork becomes increasingly important as the educational efforts of the official and voluntary health agencies succeed in bringing to the physician's office an increasing percentage of curable cancers. Cancer which can be diagnosed merely by the history or by a simple examination is seldom curable cancer; the diagnosis of early cancer requires teamwork.

This observation is equally true in the case of cancer therapy: the surgeon and the radiologist must help the internist. More than that, cancer surgery is more and more becoming radical surgery and there is a growing tendency for cancer specialism even within the fields of the several surgical branches. It is a growing recognition of these facts which is resulting in the creation of special cancer services in general hospitals and in the establishment of special cancer hospitals.

The need for this clinical teamwork is well known to all physicians; it is mentioned at this time merely to lend emphasis to two points: first, that there is another member of this clinical team whose importance is sometimes overlooked, and second, that the clinical team is not the only team needed in cancer control.

The overlooked member of the clinical team is the patient himself. Regardless of the excellence of the diagnostic and treatment skills and facilities available in any community, with the sum of our present knowledge no one can hope to cure patients suffering from advanced, disseminated, generalized cancer. Cancer to be curable must be localized cancer; localized cancer is usually early cancer; seldom does the physician see early cancer unless it is brought to him by the patient himself; and the patient cannot be expected to seek help for early cancer unless that patient has been instructed, unless he knows what to look for, what to be suspicious of, and what he can hope for if he reports promptly to his physician for medical advice.

There is occasional criticism that public education on the subject of cancer is producing cancer fear or "cancer phobia." Truly has it been said that fear does not metastasize. It is easier to cure people of their fears than to cure them of advanced cancer. Blind, unreasoning fear is usually the product of ignorance. Man's greatest fear is the fear of the unknown. Once we have the facts before us in any situation, our fears usually give way to action. Once we understand what is needed we can formulate plans of action and our terrors are replaced by determination. So with cancer. The patient with an unreasonable fear of cancer is the patient whose knowledge of the subject is limited. What is needed for that person is more education, not less.

The objective of public education in cancer control should be to remove from each person the ignorant fear which prevents him from taking steps to promote his own safety, or the equally dangerous ignorance which creates a feeling of indifference and a failure to recognize the presence of danger. For ignorance must be substituted a combination of intelligent concern and reasonable optimism. People must be taught to be concerned over the presence of a symptom which might indicate cancer; they must be taught to real-

Read before the General Meeting, State Medical Association of Texas, Annual Session, Galveston, May 9, 1946.

ize that in prompt action lies their only hope of safety; but they must also be taught that in many types of cancer this prompt action can bring them a reasonable hope for prolongation of life or of complete freedom from the disease.

So, to the clinical team must be added the other important member: the informed and coöperative patient, the patient who will permit the other members of the team to make use of their knowledge and their special skills at a time when there is some chance that they can effect a cure. Doctors cannot go out and drag into their offices cancer patients they may chance to find walking along the street. Neither can the person with early cancer be expected to report to his physician unless someone has taken the trouble to tell him where he fits into this important team and what is expected of him in his own behalf.

Who is going to instruct that patient, and how is it to be done? This introduces a consideration of the other team which must be created if there is to be success in treating cancer as a problem of community health and welfare as there is beginning to be success in treating individual cases of the disease.

Obviously the first member of the team is the physician himself. As the others of the team increase their efforts to bring cancer education to the general public, the physician will be called upon more and more for advice and for information. He will be asked, first of all, whether he approves of the program and whether he believes that the information being distributed is correct; perhaps he will be asked whether the program should be supported. Here we hope he will remember that he is himself a part of the team and that the rest of the team needs his support.

Soon the physician will notice an increasing number of his patients coming to him for professional advice. They will want to make certain that they do not have cancer. Some of them will be suffering from this disease. Early cancer is difficult to detect and nearly impossible to diagnose without consultation at least with the pathologist. The physician should demand a complete and adequate explanation for any obscure symptom. It might be cancer. Someone has said that the greatest and most important discovery in the entire field of medicine is the discovery that one should take nothing for granted. This discovery is particularly important in cancer: if you don't know, find out.

More frequently a less serious explanation will be found for the patient's complaints. In this event the educational effort has again served a good purpose: "early diagnosis and prompt treatment" is a good motto for diseases and conditions other than cancer and the physician again has an opportunity to be of service to his patient.

But what of those patients whose complaints are vague and trivial, or who present themselves for examination without specific complaints? Here the physician should exercise the highest degree of patience and good judgment. These persons are entitled to a sympathetic hearing and a careful examination. The physician should remember that the symptoms of early cancer are at best vague and confusing, and that they are particularly so to the patient. The public is being asked to seek an explanation for "danger signals" which might mean cancer. Perhaps one measure of the success of this educational effort will be the number of patients coming to the physician either without symptoms or with inconsequential symptoms. The physician should remember that unless cancer can be diagnosed while it is still in that state of vague indefiniteness, the patient's chances for ultimate cure are slim.

The physician should find time to talk with such patients, to encourage them to report regularly for physical examination and immediately at the first sign of trouble. Finally, the physician should find time to give these patients a careful and adequate examination backed by a complete and searching history. No such examination is complete without careful attention to the pelvis. A rectal examination should always be done; in the male this should include careful palpation of the prostate. In the female there should be a careful vaginal examination including a visualization of the cervix with the help of a speculum and a good light. Thoroughness of this type should apply to the other regions of the body, including those areas where lymph node enlargement is most frequent.

Thus the physician becomes the first and most important member of the team. Who else is needed?

Immediately there comes the need for the physician's professional organization, his state medical association and his county medical society. This new community team is going to require constant professional advice and guidance in the preparation of educational material and in the conduct of its program. This help can best be given through an appropriate committee of the local medical group. The cancer committee of the State Medical Association of Texas has always been the most important factor in the cancer work in this state. We hope that there will be a similar committee in every

county medical society. As the rest of the team is formed and starts to function, these county society committees will become of increasing importance. It is particularly important that this group be ready to supervise any activity which involves direct contact with the cancer patient.

Who else? Well, there are two groups who have an official and legal responsibility in any cancer control activities. They are the official health and welfare organizations. The members of these two groups thus become members of the community team who have a most important part to play. Unofficial health and welfare agencies have an equally logical interest in a community program of cancer control and must be made part of the team. The dentist has an unmatched opportunity to detect early cancers among his patients, thus the dentist too belongs on the team. In all parts of the country, the cancer education program is being accepted as a part of the community responsibility of the public schools; thus we need the help of the professional educators.

Perhaps it would be best to say that every person in the community who has an interest in the health and welfare of himself or of his neighbor should be enrolled in this effort to control America's number one enemy. And that is precisely the program of the American Cancer Society and the plan of the Texas Division of that society, now being formed.

Following the pattern of the councilor districts of the State Medical Association it is planned to create in each district a group of workers—a team—which will have three major sources of strength and leadership. First will be the medical profession who will be looked to for advice and guidance on all phases of the program and who will be entrusted with the control of all activities of a strictly medical nature. Second will be the civic-minded leaders of women in the community who will recruit a field army of workers to carry the cancer message eventually into every home in the state and who will render voluntary service to the cancer patients either confined to the home or under treatment in the hospital. These workers will be under the constant supervision of the medical members of the group and can be depended upon to render valuable service to their community. The final source of strength and leadership will be sought from the business men of the community whose primary responsibility will be to secure the funds necessary for the furtherance of the program and also to provide continuous supervision over those funds to make certain that they are wisely administered and economically expended.

The program of the American Cancer Society has three main divisions: research, education, and service. The research program is being coördinated on a national basis through a special committee, known as the Committee on Growth, of the National Research Council, an agency of the National Academy of Sciences. Allocation of funds for research purposes is made only upon the recommendation of the Research Council, which invites application for grants from competent research groups in Texas or elsewhere.

Sixty per cent of the money collected in the annual campaign for funds remains in the state where it is collected. It is to be spent for programs of education and service. The Texas Division is seeking the help of the State Medical Association, the medical schools, the official agencies, as well as of the local physicians to make certain that these programs are wisely planned and carefully administered. It is expected that funds will be made available for statewide projects of an educational nature, including the creation of opportunities for postgraduate study by physicians and similar opportunities for the other professions involved in cancer control activities. It is the ambition of the Division to reach every person in Texas with the message that many cancer deaths could be prevented by prompt recognition of the danger signals followed by early and adequate treatment.

As funds become available, it is hoped to assist in the provision of service to the cancer patients of the state. This service will consist not merely of those personal services which can be rendered by well-trained volunteers, but also services of a strictly professional nature including the detection, diagnosis, and treatment of cancer, and the care of the cancer patient, including the advanced case. This part of the program will be undertaken only with the strictest medical supervision. No such activity will be undertaken unless it conforms to general principles approved by the State Medical Association and unless it shall have the prior approval of the county medical society directly concerned. The Division will not be permitted by its by-laws or its charter to own or operate any hospital, clinic, laboratory, nursing home, or other physical facility, but it will assist existing approved institutions through the provision of funds or voluntary services. It will also be considered appropriate to assist the local medical profession to secure additional service facilities if such be necessary.

This is the organization now being formed in Texas. It has been referred to as a team, but it will not be playing a trivial game. Rather it will be engaged in a grim battle against a powerful adversary. The clinical team fights against an insidious, treacherous, and relentless disease. Our community team faces this same enemy, but also must face its allies: ignorance, fear, superstition, and social taboo.

The people of the state are contributing of their funds to fight this disease. We who are organizing this new division of the American Cancer Society are merely attempting to mobilize the forces of the community to make certain that these contributed funds are wisely and effectively utilized. In the plan of organization are provided complete medical control of all medical activities and complete medical supervision of the entire program.

It is my pleasure at this time to offer to the physicians of this state, through their recognized and official organization, the financial resources, the experience, and the sincere, altruistic interest of this newly-formed health agency. We want to help you doctors fight cancer as a community problem and thus make it easier for you to handle it when it is presented to you as a medical problem.

2310 Baldwin St.

MISCELLANEOUS

COMING MEETINGS AND CLINICS

State Medical Association of Texas, Dallas, May 5-8, 1947. Dr. C. C. Cody, Jr., Houston, President; Dr. Holman Taylor, 1404 W. El Paso St., Fort Worth 3, Secretary.

American Medical Association, House of Delegates, Chicago, December 9-11, 1946; Regular General Session, Atlantic City, N. J., June 9-13, 1947. Dr. Harrison H. Shoulders, Nashville, Tenn., President; Dr. George F. Lull, 535 North Dearborn St., Chicago 10, Secretary.

Southern Medical Association, Miami, Fla., November 4-7, 1946. Dr. M. Y. Dabney, Birmingham, Ala., President; C. P. Loranz, Empire Building, Birmingham, Ala., Secretary-Manager.

Southwest Allergy Forum, Shreveport, La., March 31-April 1, 1947. Dr. W. H. Browning, Shreveport, La., President; Dr. Sim Hulsey, Medical Arts Bldg., Fort Worth, Secretary.

Texas Association of Medical Anesthetists, Dallas, May, 1947. Dr. Claudia Potter, Temple, President; Dr. Russell Bonham, Box 6237, Houston, Secretary.

Texas Association of Obstetricians and Gynecologists, Galveston, November 2, 1946. Dr. Allen McMurrey, Houston, President; Dr. Julius McIver, 714 Medical Arts Building, Dallas, Secretary.

Texas Chapter, American College of Chest Physicians. Dr. R. G. McCorkle, San Antonio, President; Dr. Elliott Mendenhall, 1217 Medical Arts Bldg., Dallas, Secretary.

Texas Club of Internists. Dr. Robert M. Barton, Dallas, President; Dr. Julian C. Barton, 414 Navarro St., San Antonio, Secretary.

Texas Hospital Association, Houston, March 27-29, 1947. Tol Terrell, Harris Memorial Methodist Hospital, Fort Worth, President; Mrs. Ruth Barnhart, 720 College Ave., Dallas, Secretary.

Texas Neuropsychiatric Association, Dallas, May, 1947. Dr. Fred T. Rogers, Dallas, President; Dr. David Wade, 604 Capital National Bank Bldg., Austin, Secretary.

Texas Ophthalmological and Otolaryngological Society, Dallas, December, 1946. Dr. C. B. Williams, Mineral Wells, President; Dr. E. D. Dumas, 425 Medical Arts Bldg., San Antonio, Secretary.

Texas Orthopedic Society. Dr. E. A. Cayo, San Antonio, President; Dr. Edward Smith, 1215 Walker Ave., Houston, Secretary.

Texas Pediatric Society, Fort Worth, October 4-5, 1946. Dr. Max Woodward, Sherman, President; Dr. John E. Ashby, 3610 Fairmount, Dallas, Secretary.

Texas Public Health Association, Dallas. Dr. L. P. Walter, Austin, President; Mr. Earle W. Sudderth, Dallas County Health Department, Court House, Dallas, Secretary.

Texas Radiological Society, January, 1947. Dr. Herman Klapproth, Sherman, President; Dr. R. P. O'Bannon, 650 Fifth Ave., Fort Worth, Secretary.

Texas Railway and Traumatic Surgical Association. Dr. F. L. Snyder, Fort Worth, President; Dr. Ross Trigg, First National Bank Bldg., Fort Worth, Secretary.

Texas Society for Mental Hygiene. Dr. Jack R. Ewalt, University of Texas Medical Branch, Galveston, President; Mrs. Elizabeth F. Gardner, 1617 Watchhill Road, Austin 21, Executive Secretary.

Texas Society of Gastro-Enterologists and Proctologists, Dallas, May, 1947. Dr. Tom E. Smith, Dallas, President; Dr. D. L. Curb, 704 Dallas Ave., Houston, Secretary.

Texas Society of Pathologists, Houston, January, 1947. Dr. May Owen, Fort Worth, President; Dr. C. T. Ashworth, Southwestern Medical College, Dallas, Secretary.

Texas State Heart Association, Dallas, May, 1947. Dr. Robert M. Barton, Dallas, President; Dr. M. B. Whitten, Medical Arts Bldg., Dallas, Secretary.

Texas Surgical Society, Houston, October 7-8, 1946. Dr. G. V. Brindley, Temple, President; Dr. Walter Stuck, 1426 Nix Professional Building, San Antonio, Secretary.

Texas Tuberculosis Association. Dr. J. B. White, Amarillo, President; Miss Pansy Nichols, 700 Brazos, Austin, Executive Secretary.

Third Panhandle, District Medical Society, Lubbock, October 8-9, 1946. Dr. W. A. Carroll, Claude, President; Dr. George Powers, Fisk Bldg., Amarillo, Secretary.

Fourth District Medical Society, Brady, November, 1946. Dr. H. L. Locker, Brownwood, President; Dr. Glenn H. Ricks, Brady, Secretary.

Seventh, Austin, District Society. Dr. Robert B. Morrison, Austin, President; Dr. M. I. Brown, Capital National Bank Bldg., Austin, Secretary.

Eighth, Ninth and Tenth Districts Medical Society, Orange, April, 1947. Dr. Walter F. Hasskarl, Brenham, President; Dr. George W. Waldron, Medical Arts Bldg., Houston, Secretary.

Eleventh District Society, Palestine, October 31, 1946. Dr. L. L. Travis, Jacksonville, President; Dr. C. B. Young, 929 S. Confederate, Tyler, Secretary.

Twelfth, Central Texas District Society, Temple, January 14, 1947. Dr. Thomas G. Glass, Marlin, President; Dr. H. F. Connally, Jr., Amicable Bldg., Waco, Secretary.

Thirteenth, Northwest District Society, Graham, October 24, 1946. Dr. A. L. Roberts, Fort Worth, President; Dr. Joe R. Wise, 1212 W. Lancaster, Fort Worth, Secretary.

Fourteenth District Society, Dallas, December 10, 1946. Dr. C. B. Thayer, Gainesville, President; Dr. V. L. Tuck, Sherman, Secretary.

Fifteenth, Northeast Texas, District Society, Marshall, October 8, 1946. Dr. Frank Littlejohn, Marshall, President; Dr. Henry H. Neihuss, Greggton, Secretary.

CLINICS

Dallas Southern Clinical Conference, Dallas, March 17-20, 1947. Miss Thelma J. Webb, 1133 Medical Arts Bldg., Dallas 1, Executive Secretary.

New Orleans Graduate Medical Assembly, New Orleans, February 24-27, 1947. Dr. Max M. Green, Room 105, 1430 Tulane Ave., New Orleans 13, Secretary.

Oklahoma City Clinical Society, Oklahoma City, October 28-31, 1946. Executive Secretary, 512 Medical Arts Bldg., Oklahoma City.

Post Graduate Medical Assembly of South Texas, Houston, December 3-5, 1946. Secretary, 229 Medical Arts Building, Houston.

HOSPITALS NEEDING INTERNS AND RESIDENTS

Methodist Hospital, Dallas. Capacity 206 beds. C. B. Fielder, Superintendent (interns desired, July, 1947).

El Paso City County Hospital, El Paso. Capacity 192 beds. George W. Cook, Col., U. S. A., Ret., Superintendent (3 interns for one year term, graduates of class A medical school only).

STATE BOARD OF MEDICAL EXAMINERS

The Texas State Board of Medical Examiners will hold an examination session in Austin on October 31, November 1 and 2, Dr. T. J. Crowe, secretary, announces.

MEDICAL OFFICERS RETURNING TO TEXAS*

(Corrections: Robert E. Casey, formerly of Galveston, has returned to Texas City; Thomas R. Jones, formerly of Beaumont, to Pineland; MacField McDaniel, formerly of May, to Pampa; Jake Shapira, formerly of Conroe, to Houston; W. O. Williams, formerly of Houston, to Dayton, Ohio.)

NAME	Serv.†	Location	Release Date
Bell County			
16. McElroy, Robert B.	A	Rogers	
Bexar County			
120. Bernard, George E.	N	San Antonio[1]	July, 1946
121. Berry, George W.	A	San Antonio	
122. Bloom, Bernard H.	A	San Antonio	
123. Gonzalez, Joaquin B.	A	San Antonio	
124. Jackson, Dudley	A	San Antonio	
125. King, Albert C.	A	San Antonio	
126. McCarroll, William H.	A	San Antonio	
127. O'Neill, James R.	N	San Antonio	
128. Polka, James B.	A	San Antonio	
129. Reinarz, Berthold H.	A	San Antonio	
130. Sacks, David R.	A	San Antonio	
131. Schiffer, Sydney	A	San Antonio	
132. Scull, Jackson	N	San Antonio[2]	
133. Stanton, William P.	A	San Antonio	
Bowie County			
5. Thompson, George W.	A	Texarkana	
Brazos-Robertson Counties			
6. Branch, George R., Jr.	A	Bryan	
Brooks-Duval-Jim Wells Counties			
10. Allison, Albert M.	A	Alice	
Clay-Montague-Wise Counties			
4. Ware, Drue O. D.	N	Bridgeport	May, 1946
Collin County			
7. Hooper, John M.	A	McKinney	
8. Truett, Harvey K.	A	McKinney	
Colorado-Fayette Counties			
5. Youens, William T.	A	Weimar	
Coryell County			
3. Cole, Marion W.	A	Evant	
Dallas County			
178. Blair, Drury S.	A	Dallas	
179. Blend, Max H.	A	Dallas	Jan., 1946
180. Caffee, William M.	A	Dallas	
181. Carswell, Winston E.	A	Dallas	
182. Clark, Arthur J.	A	Dallas	
183. De Lange, Arnotte	A	Dallas	
184. Dunstan, Edgar M.	A	Dallas	
185. Fiegel, Walter L.	A	Carrollton[3]	Dec., 1945
186. Fromm, Charles S.	A	Dallas	
187. Jansen, Harold G.	A	Dallas	
188. Kingsley, Roy E.	A	Dallas	
189. Lee, Richard H.	A	Dallas	
190. Lyle, Edward H.	A	Dallas	
191. McNamara, James C., Jr.	A	Dallas	
192. Metz, M. Hill		Dallas	
193. Patterson, Casey E.	A	Dallas	
194. Pence, Ludlow M.	A	Dallas	
195. Pickett, Walter F.	A	Dallas	
196. Porter, George L.	A	Dallas	
197. Stell, Cecil I.	N	Dallas	
198. Stovall, Sidney L.	A	Dallas	
199. Tobolowsky, Nathan	A	Dallas	July, 1946
200. Winans, Henry M.	A	Dallas	Dec., 1945
Dawson-Lynn-Terry-Gaines-Yoakum Counties			
8. Bennett, John B.	A	Lamesa	
9. Blackburn, M. D., Jr.	A	Seminole[4]	July, 1946
Ector-Midland-Martin-Howard-Andrews-Glasscock Counties			
12. Beadles, Robert O., Jr.	A	Big Spring	
13. Hestand, Haskell E.	A	Odessa	
14. Lekisch, Kurt	A	Midland	Apr, 1946
Ellis County			
7. Stein, Ben	A	Ferris[1]	
El Paso County			
52. Kearney, William W.	A	El Paso	
53. Oakes, Harold F.	A	El Paso	
54. Pangman, W. J.	N	El Paso	
Falls County			
7. Phillips, Oliver M.	A	Marlin	
Galveston County			
48. Blocker, Truman G.	A	Galveston	
49. Coffman, Graham M.	N	Galveston	
50. Kennedy, John C.	A	Galveston	
51. Laughlin, John M.	A	Texas City[2]	
52. Rogers, Frederick F.	A	Galveston	
53. Towler, Martin L.	A	Galveston	
54. Willis, James G.	A	Galveston	
55. Witten, Thomas A.	A	Galveston	
Gray-Wheeler Counties			
8. Nicholson, Harold E., Jr.	A	Wheeler	
Grayson County			
13. Stephens, George K.	A	Whitewright	
Gregg County			
14. Bussey, James E.	A	Longview	
15. Tate, George W.	A	Longview	
Hale-Floyd-Briscoe-Swisher Counties			
8. Richards, Fred V.	N	Tulia	June, 1946
Hardeman-Cottle-Foard-Motley Counties			
3. Harmon, F. C.	A	Paducah[3]	
Hardin-Tyler Counties			
3. Harrison, Albert W.	A	Woodville	
Harris County			
231. Brandon, Sylvan	A	Houston	
232. Candy, William M.	A	Houston	
233. Clapp, James A., Jr.	A	Houston	
234. Cutler, Hayden H.	A	Houston	
235. Fleet, Carl W.	A	Houston	
236. Giessel, Julius W.	A	Houston	Apr., 1946
237. Gilbert, Howard P.	A	Houston	
238. Green, Wilbur K.	A	Houston	
239. Hubner, Alan E.	A	Houston	
240. Jones, Robert R.	A	Pasadena	
241. Legett, Carey, Jr.	A	Houston	
242. Marcuse, Peter M.	A	Houston	
243. Mendell, David	A	Houston	
244. Oldham, Dudley Y.	A	Houston	
245. Robinson, H. C., Jr.	A	Houston	
246. Rogers, Stanley F.	N	Houston	
247. Rohrer, George E., Jr.	A	Houston	
248. Seibold, George J.	A	Houston[4]	Apr., 1946
249. Sharp, William E.	A	Houston	
250. Sherrill, Ethan A., Jr.	A	Houston	
251. Stork, Walter J.	A	Houston	
252. Strashun, Mat F.	A	Houston	Oct., 1946
253. Thorning, Wm. B., Jr.	A	Houston	
254. Wallis, William McV.	A	Houston	
255. Wilhite, Hilton R.	A	Houston[5]	Mar., 1946
Hill County			
5. Robertson, James E.	A	Hillsboro	
Hutchinson-Carson Counties			
3. Anderson, Elmo D.	A	Borger	
4. Martin, Leon H.	A	Borger	
Jefferson County			
50. Covode, William M.	A	Port Arthur	
51. Mitchell, Joseph H.	A	Beaumont	
52. Parker, George E.	A	Beaumont	
53. Tritico, Joseph J.	A	Port Arthur	Feb., 1946
54. Weisbach, Phillip T., Jr.	A	Port Arthur	Apr., 1946
Karnes-Wilson Counties			
6. Kauffmann, A. F., III	N	Kenedy	
Kerr-Kendall-Gillespie-Bandera Counties			
12. Barshay, Bernard	A	Kerrville	
13. Pucie, Charles R.	A	Kerrville	
Lamar County			
9. Johnson, Malcolm L.	A	Paris	
Lubbock-Crosby Counties			
21. Spikes, Lowell W.	A	Ralls[6]	

*EDITOR'S NOTE: This list is the eleventh of a series in which it is hoped to name all those physicians who have been in the Armed Forces during the war recently passed and have now returned to Texas to resume civilian practice. The information in this list has been assembled from a variety of sources. While an attempt has been made to secure as complete and as accurate data as possible, we are aware that omissions and errors have been made. Not only for publication in the JOURNAL but also for the permanent records in the central office of the State Medical Association, we invite and urge correction of and addition to the material here submitted. Note that physicians from each county area are numbered consecutively following those listed in the August JOURNAL; the last number in each section therefore indicates the total physicians returned to that county area. The complete total for Texas named to date (August 26), including the accompanying list, is 1,646.

†A=Army; N=Navy; U=U. S. Public Health Service.

[1]Formerly of Houston.
[2]Formerly of San Angelo.
[3]Formerly of Lewisville.
[4]Formerly of Dallas.

[1]Formerly of Tyler.
[2]Formerly of West Columbia.
[3]Formerly of Floydada.
[4]Formerly of Wichita Falls.
[5]Formerly of Hillsboro.
[6]Formerly of Lubbock.

NAME	Serv.†	Location	Release Date
McLennan County			
38. Allison, Harold T.	A	Waco	
39. Edwards, Thomas G.	A	McGregor	
40. Fine, Eldon B.	A	Waco[1]	
41. Hubbs, Roy S.	A	Waco	
42. Lewis, Claude	A	Waco	
Milam County			
3. Nail, D. M.	A	Cameron	
Morris County			
1. Moore, Rufus D., Jr.	A	Omaha	
Navarro County			
5. Barnebee, J. H.	A	Blooming Grove[2]	
Nolan-Fisher-Mitchell Counties			
10. Rhode, Oscar E.	A	Colorado	
Potter County			
29. Smith, Joseph R.	A	Amarillo	
San Patricio-Aransas-Refugio Counties			
9. Ewing, Ferdinand S.	A	Sinton	
Scurry-Dickens-Kent-Garza-Borden-King-Stonewall Counties			
8. Hines, John F.		Snyder[3]	
Shelby-San Augustine-Sabine Counties			
7. Arnold, Hiram P.	A	Hemphill	
Smith County			
12. Alexander, J. E., Jr.	A	Tyler	
13. Neill, John L.	N	Tyler	
14. Sehested, Herman C.	A	Tyler	
Tarrant County			
79. Aurin, Fred B.	A	Fort Worth	
Tarrant County—Continued			
80. Bailey, Noel R.	A	Fort Worth	May, 1946
81. Cohen, Frank	A	Fort Worth[1]	
82. Stokes, Robert C.	A	Fort Worth[2]	
Taylor-Jones Counties			
20. Estes, Jack M.	A	Abilene	
Tom Green-Coke-Crockett-Concho-Irion-Sterling-Sutton-Schleicher Counties			
16. Jones, Robert R.	A	San Angelo[3]	
17. Pruet, Royce W.	N	Ozona[4]	May, 1946
18. Shelton, Joel A.	A	Sonora	
19. White, James N.	A	San Angelo	
20. Woodward, Lewis O.	A	San Angelo	
Travis County			
45. Conolly, Sidney McLean	A	Austin	
46. Cooper, Samuel S.	A	Austin	
47. Darnall, Charles M.	A	Austin	
48. Martin, Claud A.	A	Austin	
49. Welty, John A.	A	Austin	
50. White, Paul L.	A	Austin	
51. Wilson, James D.	A	Austin	
Wharton-Jackson-Matagorda-Fort Bend Counties			
12. Harris, Hunter P.	A	Fulshear	
13. Lancaster, Lifford R.	A	Ganado	
14. Livengood, Gerald S.	A	Bay City	
15. Northington, Harold	A	Wharton	July, 1946
Wichita County			
24. Hargrave, Robert L.	A	Wichita Falls	
25. Kernodle, Jefferson D.	A	Wichita Falls	
Wood County			
3. Coleman, Robert H.	A	Little Rock, Ark.	July, 1946

[1]Formerly of Cleburne.
[2]Formerly of Houston.
[3]Formerly of Groesbeck.

[1]Formerly of Dallas.
[2]Formerly of Amarillo.
[3]Formerly of Houston.
[4]Formerly of Putnam.
[5]Formerly of Mineola.

TUMOR SEMINAR AT SAN ANTONIO

Dr. Emil Novak, Johns Hopkins University School of Medicine authority in the field of gynecologic pathology, will conduct the third annual tumor seminar sponsored by San Antonio pathologists, to be held October 19, in the auditorium of the Medical and Surgical Memorial Hospital, San Antonio. Dr. B. F. Stout, San Antonio, has announced that the seminar is open to any pathologist who wishes to attend.

Twenty-five slides, all illustrating gynecologic pathology, will be studied. A box of slides and a history of every case will be furnished each pathologist, but it will be necessary for guests to bring their own microscopes.

A lecture on "Functional Uterine Hemorrhage" will be delivered by Dr. Novak in an open meeting at the hospital at 8 o'clock in the evening.

CONGRESS ON INDUSTRIAL HEALTH

The Seventh Annual Congress on Industrial Health, sponsored by the American Medical Association's Council on Industrial Health, will be held at the Copley-Plaza Hotel, Boston, September 30 through October 2. The following program has been arranged by the council:

SEPTEMBER 30

Clinical Toxicological Conference: Lead Poisoning.
Surgical Conference: The Foot in Industry.
Professional Relations Conference and Dinner.

OCTOBER 1

Opening General Session: Human Relations in Industry.
Seminars: Industrial Physiology, Administrative Methods, Workmen's Compensation.
Dinner and Conference on Pan-American Industrial Health.

OCTOBER 2

General Session: Atomic Energy—Its Effects in Industry and Medicine.
General Session: A Positive Health Program for Industry.
Dinner and Conference on Health and Welfare Programs in Industry.

MILITARY SURGEONS CONVENTION

The Association of Military Surgeons of the United States will convene October 9-11 at the Book-Cadillac Hotel, Detroit. Physicians, surgeons, dentists, veterinarians, nurses, and medical administrators are invited by association officials to attend the meetings, banquets, luncheons, symposia, and panel discussions of the session. There is no registration fee, but reservations should be made promptly with Col. Burt R. Shurly, Chairman, Hotels Committee, 1005 Stroh Building, Detroit 26.

Luncheons, teas, sightseeing trips, and other entertainment have been planned for women whose husbands are attending the convention.

OKLAHOMA CITY CLINICAL CONFERENCE

The Oklahoma City Clinical Society will hold its sixteenth annual conference October 28-31 in the Biltmore Hotel, Oklahoma City. Dr. Harrison H. Shoulders, Nashville, Tenn., president of the American Medical Association, will be one of seventeen nationally recognized physicians and specialists appearing on the program, which will consist of general assemblies, postgraduate courses, round-table luncheons, a smoker, and dinners. Commercial exhibits will also be displayed. A $10 registration fee covers the entire conference activities. Additional information may be secured from the Executive Secretary, 512 Medical Arts Building, Oklahoma City.

AMERICAN PUBLIC HEALTH ASSOCIATION

The American Public Health Association will meet in Cleveland, November 12-14, with eleven related organizations and conferences scheduled for November 11, announcement from association headquarters reveals. Special topics for the program include the health department and medical care, newer developments in the control of tuberculosis and venereal disease, "one world in health," and "landmarks of 1946." Technical and scientific exhibits and motion pictures will be displayed.

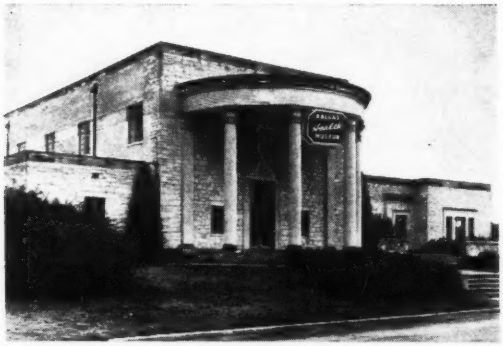
STREPTOMYCIN AVAILABLE

Streptomycin will be available in limited commercial distribution after September 1, according to announcement in *The Journal of the American Medical Association*. The drug will be issued to selected hospitals throughout the country, which will act as depots.

DALLAS HEALTH MUSEUM

Making Health "visible, audible, and intelligible" is the object of the Dallas Health Museum, which will be open for the first time during the State Fair of Texas, October 5-20. It will be housed in the former Museum of Natural Resources Building in Fair Park, Dallas, near the Ranger station, and will be a permanent institution.

Although plans call for a separate charter with a full-time director and assistants to operate the museum, the project is being launched by the Dallas Academy of Medicine, established only last June. The initial exhibits are being prepared by the various groups which coöperate in the academy: Dallas County Medical Society, Dallas County Dental Society, Dallas Hospital Council, Dallas Nurses Association, Dallas County Pharmaceutical Association, and Medical Service Society. As far as is known the academy is the only organization in the nation which unites all such related groups and furnishes a channel through which they can work together on common objectives.



The Dallas Health Museum, which will open October 5.

In inviting Texas physicians to visit the new Health Museum, especially when they attend the State Fair in October, Dr. Oscar M. Marchman, president of the Dallas Academy of Medicine, points out that a health museum is a school with the whole community as its pupils. The Dallas Health Museum will convey the messages of good health to all the citizens of Dallas and the Southwest through artistic exhibits, three dimensional sculpture, motion pictures, lectures, and demonstrations. Dr. Marchman anticipates that the Museum will serve particularly well when the advent of new disease threats or sanitation problems make of prime importance the education of the public in health matters.

Another immediate project of the Dallas Academy of Medicine is the erection of a $500,000 building adjacent to the Southwestern Medical Foundation, which will contain the offices of the various health organizations which are members of the academy, a medical library, an auditorium, and several small meeting rooms.

In addition to Dr. Marchman as president, the academy recently elected Dr. Henry L. Rice as vice-president and W. Ray Spears as secretary-treasurer.

EFFECT OF JAPANESE IMPRISONMENT

Three years in Japanese prison camps, most of the time on starvation rations and subjected to frequent beatings, had surprisingly little effect on the minds of more than 4,000 American soldiers who survived the ordeal.

Wherever these men landed in the United States after liberation they were met by teams of medical specialists assigned from the office of the Surgeon General. A report on the neuropsychiatric findings has just been made by Lt. Col. Norman Q. Brill, who was in charge of this phase of the examinations.

Considerable importance was attached to early medical contact with the released soldiers because, says Dr. Brill, "never before in this country's history had such a large group been exposed to starvation, torture, and humiliation." The psychiatrists were interested in the factors that were responsible for the survival of these men when so many of their comrades, in about the same physical condition when captured, had succumbed. The nearest they came to finding a common factor, however, was what is described in the report as a "tremendous will to live." Otherwise the soldiers differed in about every possible way.

"All of them," says Colonel Brill's report, "lived only for the day. Indeed when one of them would fail to concentrate on or begin to hoard food, or gave way to morbid thoughts concerning the seemingly hopeless situation, he was earmarked by his companions as quite likely to die shortly. A prisoner who would hoard his rice allowance for several meals in order to enjoy the sensation of one large meal was referred to as 'rice happy.' This was generally an indication of the beginning of deterioration and early demise.

"When those of lesser spiritual strength became ill they were likely to give up, quit eating entirely, and frequently would die within a few days. One fails to find a scientific reason or an adequate term to explain survival. It seemed to some of the examiners that 'courage' was the best word. It seemed that the only common factor among the survivors was that they had courage. They never stopped in their struggle for survival. They ate anything available including cats, dogs, silk worms, and other things repulsive to normal human beings. When struck with dysentery and malaria they would nevertheless attempt to carry on. This strength and courage had no connection with social background or education."

The men themselves, Colonel Brill said, expressed no concern about their ability to readjust to life in the United States. Regardless of the future, they felt, they would meet any situation likely to arise after living through the prison camp years.—S. G. O. Notes, May 15, 1946.

BLOOD CLOTTING IN VEINS

A Swedish physician's five year study reveals that patients suffering from acute venous thrombosis can be spared pain, ulcers, and even death, by treatment with heparin, one of the drugs which prevents blood clotting.

Gunnar Bauer, M. D., surgeon in chief of the General Hospital in Mariestad, Sweden, presents his report in the May 18 issue of *The Journal of the American Medical Association.*

Between October 1, 1940, and September 30, 1945, 209 cases of acute thrombosis of the deep veins of the leg were treated at the Mariestad Hospital. As a result of heparin treatment, pain, fever, and swelling were eliminated; the average period in bed was shortened from 40 days to about 4.7 days; the death rate was reduced to less than one tenth of what it was before.

The author reviewed a series of 264 patients with thrombosis treated by accepted methods over a 10 year period and found that 47 died. In the heparin treated group, covering a five year period, only three died.

Dr. Bauer made an intensive study to prove his theory that the starting point of the clotting process was in the lower part of the leg. X-ray diagnosis, used on 190 patients, showed in over 98 per cent various phases of evolution of the clot in this region.

The author suggests that this knowledge should be an important aid in diagnosing the disease in its early stage. Whenever there is a rise in temperature without any obvious reason, or a pain or stitch in one side of the chest, the lower part of the patient's leg should be immediately examined. X-rays are the only way to confirm the diagnosis. However, if swelling and blueness of the skin are present it indicates that the disease is in an advanced stage and unfortunately it is then often too late for treatment.

One of the unpleasant after-effects of this disease has always been ulcers of the leg. Dr. Bauer states that from 80 to 90 per cent of leg ulcers which are thought to be due to varicose veins are really caused by an earlier deep thrombosis. Heparin treatment clears up the infection in a few days and eliminates such painful and incapacitating developments in the future.

The author summarizes his suggested method of treatment in four steps: "(1) early diagnosis, (2) immediate intensive heparinization (by injection into the veins), (3) movements of the leg from the beginning, and (4) getting the patient out of bed the moment the acute thrombosis symptoms disappear, before the termination of heparin injections."

INTER-AMERICAN CARDIOLOGY CONGRESS

The Second Inter-American Congress of Cardiology will convene October 6-12 in Mexico City, sponsored by various cardiology societies of North, Central, and South America. The first congress was held when the National Institute of Cardiology was dedicated in Mexico City in 1944, at which time the Inter-American Society of Cardiology was established. Ten delegates from the United States, including Drs. G. R. Herrmann, Galveston; T. R. Harrison and Arthur Grollman, Dallas; and Joseph Kopecky, San Antonio, became charter members, Dr. Herrmann reports.

Essayists will include outstanding clinicians of Europe as well as of the Western Hemisphere. Dr. Herrmann and perhaps Dr. Grollman will present papers. Papers may be read in English, Spanish, French, or Portuguese, but will all be summarized in English.

Information regarding the Congress may be secured from the Central Committee, National Institute of Cardiology, Calzada de la Piedad 300, Mexico, D.F.

RADAR WAVES HARMLESS

Ten centimeter electro-magnetic waves, such as constitute radar pulses, apparently are harmless. This has been determined by intensive exposures of guinea pigs to this radiation at the Aero Medical Laboratory at Wright Field. The experiments are described in a report just made to the office of the Surgeon General by Lt. Col. Richard H. Follis, now of Duke University.

These extremely short radio waves first came into extensive use during the war in military equipment and army and navy personnel necessarily were exposed to them for long periods. Their biological effects were entirely unknown, although there was no reason to suppose that they would be in any way detrimental. Nevertheless disquieting rumors arose and attained considerable circulation that long exposure to the radiation might cause baldness or even sterility. Presumably the rumors were due to confusion with known effects of x-rays and ultraviolet radiation, both of which are at the other end of the spectrum. There, wave lengths are much less than those of visible light whereas the ten centimeter waves are thousands of times longer, and are called "short" only in comparison with other radio waves.

At the Wright Field laboratory Dr. Follis exposed 13 male guinea pigs to ten centimeter radiation three hours daily for from 51 to 53 days. At the end of this time they were killed and every vital organ studied. Absolutely no deviations from the normal were found. There was no loss of hair, and no evidence of sterility. It also was determined that no x-radiation, which might have been harmful, was mixed with the radio waves. There is no reason to suppose that human beings would be affected differently from the experimental animals.

Early in the war clinical studies were made of Navy volunteers exposed for long periods to high frequency radio waves, although not in measured amounts such as were used in the guinea pig experiments. No pathological effects were found. Some of the subjects had complained of headaches after several hours of exposure, but these disappeared shortly after exposure was ended.—S. G. O. Notes, May 15, 1946.

LIBRARY NOTES

The package library consists of collections of reprints and other periodical material on various subjects, prepared for lending to members of the Association. Requests for packages should be addressed "Library, State Medical Association of Texas, 1404 W. El Paso Street, Fort Worth, Texas." Twenty-five cents in stamps should be enclosed with the request to cover postage and part of the expense of collecting the material. Only one package may be borrowed at a time, and packages are allowed to remain in the hands of the borrower for 14 days.

PACKAGE SERVICE

Packages were mailed from the Library of the State Medical Association of Texas during August, to the following:

Dr. Holloway Bush, McKinney—*Blood Sugar, hypoglycemia* (8 articles).

Dr. Hervey W. Dietrich, El Paso—(1 journal).

Dr. Thurman A. Kinder, Jr., Brownsville—*Paralysis, cerebral* (21 articles).

Dr. J. T. Krueger, Lubbock—*Adrenals, cancer* (9 articles).

Dr. Denman C. Hucherson, Houston—*Pelvis, fractures* (12 articles).

Dr. Ernestine Smith, Amarillo—*Tuberculosis, Pulmonary, therapy* (6 articles); *Streptomycin* (4 articles).

Dr. R. R. Lovelady, Santa Anna—*Amyloidosis* (18 articles).

Dr. Paul H. Wedin, Houston—*Blood Pressure, High, therapy* (12 articles).

Dr. P. W. Malone, Big Spring—(13 journals).

Dr. U. J. Dowling, Amarillo—(1 journal).

Dr. Earl R. Cockerell, Abilene—(6 journals).

Dr. David L. White, San Marcos—*Sulfonamides* (17 articles).

Dr. J. R. Nicholson, San Antonio—*Urea* (13 articles; *Vitamin Bc* (15 articles).

Dr. Joe Shipman, Vernon—*Heparin* (23 articles).

Dr. Robert H. Bell, Palestine—*Surgery, postoperative care* (6 articles); *Sutures* (16 articles).

Mrs. Laura McElroy, Dallas—(1 journal).

Mr. Fulton E. Dye, Jr., College Station—*Medicine, socialized* (12 articles).

Dr. H. E. Rosser, Snyder—*Sprue* (11 articles).

Dr. Y. S. Jenkins, Taft—(2 journals).

Memorial Hospital Library, Corpus Christi—(1 journal).

Dr. John L. Dean, Jr., Crockett—(2 journals).

Dr. George M. Tulloch, Okmulgee, Okla.—(3 journals).

Dr. R. W. Burford, Dallas—*Herpes Zoster* (1 article).

Dr. J. E. Loveless, Slaton—*Burns, therapy* (9 articles).

Miss Ruby Richardson, Belton—*Medicine, socialized* (12 articles).

Mrs. J. A. Odom, Memphis—*Medicine, socialized* (12 articles).

Miss Marie Hopper, Avery—*Medicine, socialized* (12 articles).

Dr. J. W. Neeley, Pecos—*Anesthesia, procaine and procaine compounds* (7 articles); *Heart, blood supply* (12 articles).

Dr. F. O. McGehee, Houston—*Osteosclerosis, fragilis* (15 articles).

Dr. D. R. Swetland, Marlin—*Orthopedics* (28 articles).

Dr. V. E. Friedewald, Big Spring—*Diabetes Mellitus, therapy* (4 articles).

Dr. Fred W. Sutton, Beaumont—*Leprosy, therapy* (10 articles).

Dr. M. C. Overton, Pampa—*Sleep, disorders* (11 articles).

Dr. J. B. Birt, Harper—(1 journal).

Dr. Melba McNeil, Abilene—*Hernia, diaphragmatic* (11 articles).

Dr. J. D. Magee, Abilene—*Larynx, cancer* (9 articles.

Dr. Lorence W. Feller, Fredericksburg—*Sterility* (17 articles).

Dr. Robert F. Thompson, El Paso—*Prostate, cancer* (15 articles).

Dr. Ralph H. Homan, El Paso—*Coronary Vessels, occlusion* (7 articles).

Dr. G. F. Madding, San Angelo—*Liver, Kidney and Spleen, cysts* (15 articles).

Dr. M. Hoch, Smithville—*Paralysis, spastic* (10 articles).

Dr. Charles H. Brown, Wichita Falls—*Urination, incontinence* (23 articles).

Providence Hospital Library, Waco—*Sarcoma, fibrosarcoma* (7 articles); (1 journal); *Colon, surgery* (10 articles).

Southwestern Medical Library, Dallas—(5 journals); (1 journal).

Scott & White Clinic Library, Temple—(3 journals); (1 journal).

Dr. F. J. L. Blasingame, Wharton—*Trichinosis* (7 articles).

Dr. Jesson L. Stowe, El Paso—*Abortion, prevention* (12 articles).

ACCESSIONS

Chicago, American Medical Association—Council on Pharmacy and Chemistry Reports; New and Nonofficial Remedies.

Brooklyn, N. Y., Chemical Publishing Co.—Cusset: English-French and French-English Technical Dictionary.

SUMMARY

REPRINTS RECEIVED, 752.	LOCAL USERS, 36.
JOURNALS RECEIVED, 222.	BORROWERS BY MAIL, 47.
ITEMS CONSULTED, 472.	PACKAGES MAILED, 56.
ITEMS TAKEN OUT, 160.	ITEMS MAILED, 673.

TOTAL ITEMS CONSULTED AND MAILED, 1,247.

NEWS

Contributions to this department will be appreciated. News should be of general medical interest, such as public health activities, new hospitals, personal items of more than local value, etc. News for a particular number of the JOURNAL should be in the hands of the Editor not later than the fifteenth of the preceding month.

Tom Green County has allocated $7,000, an increase of $4,000, to the San Angelo-Tom Green County Health Unit, effective next January 1, according to the San Angelo *Standard*. The health unit began a new fiscal year July 1 with a total budget of $48,704, including an increase of about $3,000 in salaries.

The Veterans Administration Hospital at Waco has been assigned twenty-seven new medical officers of the Army and Navy to relieve the acute shortage of personnel among Veterans Administration medical staffs, reports the Waco *Tribune-Herald*. A new program will allow these physicians to receive residency training which may be applied toward receiving recognition by specialty boards. It is anticipated that additional physicians will be assigned to the hospital for residency in neuropsychiatry under a plan to provide permanent additions to the Veterans Administration medical staffs. Dr. Charles L. Yeager, until recently chief of neuropsychiatric service at Lawson General Hospital, Atlanta, Ga., will direct the residency program. He said a local program of several months duration will be offered for nurses aides, recreational workers, librarians, occupational therapists, physiotherapists, and volunteer workers to give them definite knowledge of psychiatric problems and methods of meeting them.

Hotel Dieu, El Paso, expects to construct a seven-story addition to the present hospital building and is conducting a campaign to solicit funds for that purpose, reports the El Paso *Times*.

A San Antonio Medical Center was one step nearer realization in July when the board of directors of the Chamber of Commerce accepted a report from the medical foundation committee and authorized the executive committee to proceed with organization and incorporation of a medical foundation for the city, the San Antonio *Express* states. Nine trustees not members of the medical profession will be selected by members of the Chamber of Commerce board of directors. The foundation will then be incorporated, and an initial fund of $50,000 will be raised. An expert medical surveyor to advise what projects the foundation should undertake will be employed, and an executive to administer business details will be hired. The expressed purposes of the foundation are to arouse a community consciousness of the imperative public medical necessities in the area, to improve the health of people in the section, to improve the care of sick persons of the community, to foster medical teaching, and to encourage and sponsor medical research.

The Texas Division, American Cancer Society executive committee has announced appointment of fifteen directors to supervise allocation and expenditure of funds in local areas throughout Texas, informs the Houston *Chronicle*. The directors include Drs. Paul Brindley, Chauncey D. Leake, Robert Moore, and John Sinclair, University of Texas Medical School; A. L. Dippel, W. H. Moursund, H. F. Poyner, and S. A. Wallace, Baylor University College of Medicine; Everett Fox, William L. Hart, Charles L. Martin, and William F. Mengert, Southwestern Medical College; Dudley Jackson, San Antonio; Charles Phillips, Temple; and Stanley J. Seeger, Texarkana.

The M. D. Anderson Hospital for Cancer Research, which will become a permanent part of the Texas Medical Center, has been placed under the directorship of Dr. Randolph Lee Clark, a native Texan recently released from the Army, in which his last assignment was as director of surgical research and of the department of surgery at the School of Aviation Medicine, Randolph Field, according to the Galveston *News*. The Board of Regents of the University of Texas, of which the M. D. Anderson Hospital is a part, appointed Dr. Clark to succeed Dr. E. W. Bertner, Houston, who has been acting director of the hospital since its establishment in 1942 by the Legislature following donation of $500,000 for such a hospital by the Anderson Foundation. Dr. Clark, a native of Hereford, took medical degrees at the Medical College of Virginia and the graduate school of the University of Minnesota, did graduate work at the University of Paris, and was associated with the Mayo Foundation for several years, among other professional activities. Dr. Clark expects to tour cancer institutes throughout the country during the fall to secure data for increasing the effectiveness of the M. D. Anderson

Hospital. Although not now a practicing physician, Mrs. Clark is also a doctor of medicine.

To show its appreciation of the time and abilities which Dr. Bertner has donated in the past four years to the establishment of the M. D. Anderson Hospital, the University of Texas Board of Regents in session at Austin on July 13 passed the following resolution:

"The resignation of Dr. E. W. Bertner as Acting Director of the M. D. Anderson Hospital for Cancer Research brings to a close one of the most distinguished and important services ever rendered the University of Texas.

"From the earliest inception of the hospital, Dr. Bertner has devoted to it abilities of the highest order for which he has declined all offers of compensation. He has found time for this service in a professional life already full of honor and responsibility, and through rare administrative talent and enthusiasm has brought the hospital to a position in public esteem where its future is assured beyond peradventure. His past devoted interest guarantees that his technical resignation will not deprive the hospital of his continuing care and support.

"The Board of Regents wishes to record its profound appreciation for his devoted and distinguished service to the University, and it is ordered that this resolution be spread upon the minutes in permanent testimony thereof."

A Hite Laboratory Building in the Texas Medical Center will be erected in conjunction with the M. D. Anderson Hospital, Dr. E. W. Bertner, president of the center, has announced through the Houston *Chronicle*. About $500,000 of the $700,000 willed to the University of Texas for cancer research by the late Mrs. Rosalie B. Hite of Houston will be used for the building. Tentative plans for such a building had been under consideration for some time, Dr. Bertner said, but announcement was made after a district court order in Austin gave the University Regents full authority to administer funds of the Hite endowment.

Texas Medical Center.—William A. Kirkland, executive vice-president of the First National Bank of Houston, has been named to the board of trustees of the Texas Medical Center, reports the Houston *Press*.

A Veterans Administration Hospital to be built adjacent to the Texas Medical Center has been approved by President Harry S. Truman, states the Houston *Press*. The hospital will cost approximately $7,000,000.

Baylor University College of Medicine juniors and seniors are securing practical experience as well as filling a distinct need by acting as nurses at Hermann Hospital with the approval of University officials, informs the Houston *Chronicle*. Fifteen male nurses are now on call for private duty when not involved with their medical studies. The director of nursing at the hospital indicated that the young men have proved popular with their employers and are easing a tight nursing situation.

University of Texas.—Dr. Jose R. de Valle, professor of pharmacology at the Instituto Butantan, Sao Paulo, Brazil, has spent several months in the Pharmacology and Tissue Culture Laboratories of the University of Texas Medical Branch as a part of his study in connection with a Guggenheim traveling fellowship.

A. Packchanian, Ph. D., director of the Laboratory of Microbiology, has been invited to give a series of lectures in Brazil during September on Chagas' disease in North America and on the differential diagnosis between Weil's disease, yellow fever, and jaundice. Dr. Packchanian has recently completed a preliminary survey of Chagas' disease in Texas, assisted by Dr. Piero Manginelli of the University of Sao Paulo, Brazil, and supported in part by the Houston Foundation and Jesse Jones.

W. A. Selle, Ph. D., professor of physiology, is surveying American medical centers under the auspices of the Baruch Committee for Physical Medicine to develop satisfactory methods for teaching the medical application of physics to undergraduate medical students.

Recent changes in the staff of the University of Texas Medical Branch announced by Chauncey D. Leake, Ph. D., vice-president and dean, include the resignation of Dr. Stephen Weisz, associate professor of neuropsychiatry and assistant director of the State Psychopathic Hospital, to become associated with Southwestern Medical College, Dallas; the resignation of W. D. Collings, Ph. D., professor of physiology, to become a member of the University of Iowa staff; the resignation of Thurlo Thomas, Ph. D., assistant professor of anatomy, to become professor of zoology and chairman of the department at Carlton College, Minnesota; the resignation of E. H. Frieden, Ph. D., research associate in dermatology and syphilology, to become associated with the Zoology Laboratory of Harvard University; the resignation of Arthur Whiteley, Ph. D., research associate in the Tissue Culture Laboratory, to accept a National Research Council fellowship at the California Institute of Technology; and the resignation of Dr. E. J. Lefeber, assistant professor of medicine and director of the Student Health Service, to become director of the Galveston clinic of the Veterans Administration.

Dr. A. N. Taylor, of the Physiology Department of the University of Texas School of Medicine, has received a grant of $3,000 from the Life Insurance Research Fund to continue his studies on blood circulation, informs the Galveston *Tribune*. Dr. Taylor and his associates in the department, Drs. Eric Ogden, D. W. Cowling, and R. J. Ralston, have demonstrated for the first time that the blood flow in the major parts of the body is more rapid in the stream center than in the sides next to blood vessel walls.

The Faculty Research Council of the University of Texas Medical Branch has issued a circular letter pointing to the need for funds for current research projects for which money may not be immediately available and for the initiation of major projects in new fields for which substantial support is necessary. The council, consisting of Drs. George M. Decherd (medicine), Robert M. Moore (surgery), Eric Ogden (physiology), J. Allen Scott (preventive medicine), Stephen Weisz (neuropsychiatry), and Robert I. Wise (bacteriology), administers and allocates a faculty research fund for which contributions are being solicited. Acknowledgment of donations will be made in the council's annual report and, when feasible, specific recognition will be made in publications resulting from research.

Southwestern Medical College has received two grants totaling $12,500 from the American Cancer Society for investigation and treatment of cancer with radioactive substances, according to the Dallas *Medical Journal*. A faculty member to establish a Department of Biophysics for clinical investigations using radioactive materials will be paid $6,000 from one grant, while $6,500 has been allotted for purchase of radium and accessories for the treatment of indigent patients.

Dr. Arthur Grollman, professor of medicine at Southwestern Medical College, left early in August to give a three weeks series of lectures and conduct clinics in Central America, primarily in Panama City and San Jose, Costa Rica.

Upon completion of its third year of medical education and scientific research in July, Southwestern Medical College reported 200 doctors graduated, including 134 in the Army program, 27 in the Navy, and 39 civilians. The staff has grown from 40 to 88 full-time members and 235 clinical members. The

current student body has increased from 160 to 208. More than 150 scientific papers written by faculty members have been accepted for publication by medical journals. A financial report showed $75,000 received from national foundations, pharmaceutical houses, and private benefactors for specific research projects during the past fiscal year in addition to the $306,002 annual budget expenditure by the foundation for the operation of the college and for research, according to the Oak Cliff *Tribune*. Research actively in progress at the present time includes studies of improved methods for the diagnosis and treatment of virus diseases, diseases of children, cardiovascular diseases, and the aging process in the cells of the body.

PERSONALS

Dr. A. I. Folsom, Dallas, was installed as president of the American Urological Association at its 1946 session, *The Journal of the American Medical Association* reports.

Dr. C. H. Altheide, San Antonio, had an oil painting in the Eighth Annual Exhibition of the American Physicians Arts Association in San Francisco, July 1-5.

Dr. Walter A. Ostendorf, formerly of San Antonio, will be medical officer of the Civil Aeronautics Administration at Fort Worth, thus becoming one of the first two C. A. A. regional medical officers of the country, according to the San Antonio *Express*. Dr. Ostendorf has been with the C. A. A. in Washington since being released from the Army.

Dr. C. A. Dwyer, county psychiatrist, was named acting director of the Harris County Health Unit in June upon the resignation of *Dr. Harold A. Wood*, director, to accept a position as assistant medical director of the Red Cross office in St. Louis, the Houston *Chronicle* informs.

Dr. T. R. Burnett, health officer of Mission for the past ten years except when he was in active service during World War II, resigned effective July 1, states the Mission *Times*.

Dr. David M. Cowgill, former city health officer of Amarillo and more recently of Anchorage, Alaska, has assumed the directorship of the Abilene-Taylor County Health Unit, according to the Abilene *Reporter-News*.

Drs. George W. Parsons and *Perry Priest*, Texarkana, Texas, presented papers at the Arkansas Medical, Dental and Pharmaceutical Association annual session in Texarkana, July 10-12, reports the Texarkana *Gazette*.

Dr. Rawley W. Ward has been succeeded as Victoria County health officer by Dr. Roy S. Lander, recently released from military service, according to the Victoria *Advocate*. Dr. Ward resigned after serving as health officer for the past twelve years.

Dr. B. E. Pickett, Carrizo Springs, President-Elect of the State Medical Association, has been appointed by Governor Coke Stevenson to fill a vacancy on the State Board of Health, informs the Austin *American*.

Dr. Joaquin Gonzalez Cigarroa, Laredo, was honored at a surprise testimonial dinner party in the New Plaza Hotel in Laredo in July to celebrate his twenty-five years of medical practice, reports the Laredo *Times*.

Dr. H. C. Wilson, who has served the past few months as director of the Bowie-Texarkana Health Unit, has resigned to enter private practice at Hooks, states the Texarkana *News*.

Dr. D. K. Jamison, Denison, has resigned as division surgeon of the Katy Employes Hospital to devote his full time to private practice and to other business interests, which include ownership with his son of a dairy and creamery, the Denison *Herald* announces. *Dr. Charles Truett*, a recent addition to the hospital staff, will succeed Dr. Jamison.

Dr. L. W. Leggett has purchased the Thomas Building in Midland from *Dr. John B. Thomas*, according to the Midland *Reporter-Telegram*. Dr. Leggett will maintain his offices in the building, which houses oil company offices and other business firms as well as professional offices.

Dr. Perry C. Talkington, Dallas (neuropsychiatry), and *Robert M. Moore*, Galveston (general surgery), for the Fourth Army area, and *Drs. Roy G. Giles* (x-ray), *John L. Matthews* (ophthalmology), *Samuel F. Moore* (obstetrics), *Lawrence M. Shefts* (thoracic surgery), *Walter G. Stuck* (orthopedics), and *Charles S. Venable* (general surgery), all of San Antonio, for Brooke General Hospital, Fort Sam Houston, have been appointed consultants to the Secretary of War through the Surgeon General, the War Department has announced.

MARRIAGES

Dr. J. C. A. Eckhart, Jr., of Austin, on duty in Corpus Christi with the Naval Reserve, married Miss Ada Jane Williams, Galveston, on July 27.

Dr. John Wetegrove, Jr., formerly of Raymondville and now an intern at Baylor Hospital, Dallas, married Miss Dorothy Eldridge, Mercedes, on June 17.

Dr. Mose H. Blaine, Dallas, married *Dr. Alva Lockhart*, Pharr, on June 16. Both will intern at Baylor Hospital, Dallas.

Dr. John Marvin Smith, Jr., San Antonio, married Miss Jane Jordan, Victoria, on March 24.

SOCIETY NEWS

Bastrop County Society

July 5, 1946

(Reported by Joe V. Fleming, Secretary)

Bastrop County Medical Society members were entertained at dinner by Smithville physicians at the Pines Hotel, Smithville, July 5. Eleven members, wives, and guests heard Joe V. Fleming, Elgin, discuss the legislative program of the State Medical Association, especially the basic science bill proposed for introduction in the next Legislature. A resolution supporting the program was unanimously passed, and it was agreed that the newspapers in the county and the local candidates for the Legislature would be notified of the action.

Bexar County Society

July 16, 1946

Bexar County Medical Society and Auxiliary met July 16 at the Medical Library in San Antonio to hear C. C. Cody, Houston, President of the State Medical Association, discuss the proposed basic science law. Merton M. Minter, San Antonio, chairman of the State Medical Association's Public Relations Committee, spoke on the Wagner-Murray-Dingell bill, and John Burleson, San Antonio, chairman of the Legislative Committee, discussed local candidates for representative. V. H. Tucker, president of the Bexar County Medical Society, presided. About 225 were present.

Bowie County Society

Bowie County Medical Society and Miller County Medical Society of Arkansas have notified the city councils of Texarkana that they are 100 per cent behind a campaign to clean up the city and get rid of filth and preventable diseases. In a letter from the societies to the city officials and to the press the societies pointed out the highly insanitary sewage conditions which exist in varous parts of the city, the unsatisfactory system of garbage disposal, and the inadequate organization for enforcement of sanitary measures.

Colorado-Fayette Counties Society

June 25, 1946

Diseases of the Small Intestine and Dysentery—Herbert M. Hill, San Antonio.

Colorado-Fayette Counties Medical Society met

June 25 in Methodist Hall, Columbus, with Leo Peters, Schulenberg, president, presiding. The program, directed by S. H. Kirkham, consisted of a talk on intestinal diseases by Herbert M. Hill, San Antonio. Announcement was made of a meeting for discussion of the proposed basic science law to be held July 2. A chicken barbecue supper with the auxiliary was enjoyed following the business meeting.

Harris County Society

Harris County Medical Society has set up a ten-member board from its membership to hear complaints and make adjustments on claims by patients that they have been overcharged by their physicians. Announcement of the new plan was made in July by John M. Trible, chairman of the legislative and public health committee. He said that complaints will be received at the office of the medical society secretary and that the board will meet on call to hear both sides of the case after making an independent investigation. Consideration will be given to the patient's ability to pay and recommendations for adjustments will be made only after a study has been made of the patient's income and other obligations. The decision of the board will not be final, Dr. Trible pointed out. The patient can take his complaint to the medical society and even to the State Medical Association. Dr. Trible believed the Harris County board to be the first of its kind in Texas.

Pecos-Jeff Davis-Presidio-Brewster Counties Society

June 16, 1946

Pulmonary Embolism—Henry Leopold, San Antonio.

Pecos-Jeff Davis-Presidio-Brewster Counties Medical Society members and a few other guests were entertained by Dr. and Mrs. L. A. Lavanture with a steak dinner at the Crews Hotel, Marfa, June 16. The dinner was to honor the Lavantures' son-in-law and daughter, Dr. and Mrs. Henry Leopold, San Antonio.

Dr. W. E. Lockhart, Alpine, president of the society, presented Dr. Leopold, who read a paper in which the history of methods of treating pulmonary embolism was reviewed and his own experiences in treating the disease were discussed. At the request of the society, Dr. Leopold also told something of the epidemic with which San Antonio has been confronted recently.

Taylor-Jones Counties Society

July 17, 1946

Hernia, a Surgical Problem—R. W. Varner, Abilene.
Newer Advances in Treatment of Anemia—L. J. Webster, Abilene.
Diagnosis and Treatment of Corneal Foreign Bodies—J. D. Magee, Abilene.
Athlete's Foot—Earl R. Cockerell, Abilene.
Physiological Changes of Senescence—C. A. McFadden, Abilene.
Selected Subjects—John Chapman, Henry Winans, and Robert S. Sparkman, Southwestern Medical College, Dallas.

Taylor-Jones Counties Medical Society held its annual midsummer clinic at Hendrick Memorial Hospital, Abilene, July 17, with more than sixty physicians from West Texas in attendance. The morning session was devoted to papers by five Abilene physicians, while the afternoon program consisted of three papers by members of the Southwestern Medical College faculty. The guest speakers were also available for discussions and questions.

Abilene physicians and their wives were hosts to the Dallas visitors for dinner and entertainment at the Abilene Country Club following the clinic. W. A. V. Cash and L. J. Pickard were in charge of arrangements.

Twelfth District Society

July 9, 1946

(Reported by H. F. Connally, Jr., Secretary)

Twelfth District Medical Society members numbered more than sixty at a one-day meeting in Corsicana on July 9, at which T. G. Glass, Marlin, president, presided. The following scientific program was carried out:

Early Ambulation in Surgery—R. B. Grant, Bryan.
Postoperative Intravascular Clotting—H. H. Trippet, Waco.
Common Eye, Ear, Nose, and Throat Misconceptions—E. R. Veirs, Temple.
Diagnosis and Treatment of Gout—N. D. Buie and A. E. Von Tobel, Marlin.
Preliminary Report on the Treatment of Paralyzed Muscles in Anterior Poliomyelitis by Temporary Procaine Paralysis Spasmodic (Good) Muscles—H. E. Hipps, Waco.
Some Problems in the Diagnosis of Brucellosis—G. H. Sanders, Kerens.

H. Frank Carman, Dallas, spoke on "Development of Our Ideas Regarding Tuberculosis" at a luncheon given by Navarro County Medical Society for the District Medical Society and Auxiliary.

An invitation from Temple, extended by Drs. Veirs and G. V. Brindley, to hold the next meeting of the society there January 14, 1947, was accepted. The same officers, Dr. Glass, president, and H. F. Connally, Jr., Waco, secretary, will continue to serve until January.

Arrangements for the Corsicana meetings were made by E. H. Newton, W. K. Logsdon, and W. R. Sneed.

AUXILIARY NOTES

Officers of the Woman's Auxiliary to the State Medical Association of Texas: President, Mrs. George Turner, El Paso; President-Elect, Mrs. Edward C. Ferguson, Beaumont; First Vice-President, Mrs. L. B. Windham, Tyler; Second Vice-President, Mrs. V. M. Longmire, Temple; Third Vice-President, Mrs. R. E. Clark, Memphis; Fourth Vice-President, Mrs. J. E. Hogan, Big Spring; Corresponding Secretary, Mrs. Robert F. Thompson, El Paso; Recording Secretary, Mrs. M. A. Ramsdell, San Antonio; Publicity Secretary, Mrs. J. F. Campbell, Fort Worth; Treasurer, Mrs. Guy Jones, Dallas; Parliamentarian, Mrs. Joe Nichols, Atlanta.

AUXILIARY NEWS

Bexar County Auxiliary board members and committee chairmen numbering thirty met May 24 as guests of the new president, Mrs. Dan Russell, for luncheon at the San Antonio Country Club. In a business meeting preceding the luncheon the group made plans for the year. It was decided to hold a board meeting the fourth Friday of every month prior to each meeting of the auxiliary and for each committee worker to keep notes throughout her term of office to make suggestions to her successor.

Bexar County Auxiliary met jointly with the Bexar County Medical Society on July 16 on the lawn of the Medical Library. Dr. V. H. Tucker, president of the society, presided. He introduced Mrs. Dan Russell, president of the auxiliary, who in turn introduced Mrs. Frank Haggard, chairman of the State Auxiliary School of Instruction Committee. Dr. Merton M. Minter, chairman of the Public Relations Committee of the State Medical Association, spoke on the Wagner-Murray-Dingell bill, and Dr. John Burleson, chairman of the State Medical Assosiation's Legislative Committee, discussed the local candidates for representatives. The principal speaker of the evening, Dr. C. C. Cody of Houston, President of the State Medical Association, spoke on the medical practice act. Tamales and beer were served to 225 after the meeting. Mrs. John L. Pridgen was in charge of arrangements.—Mrs. R. J. Gossett, publicity secretary.

Colorado-Fayette Counties Auxiliary heard a discussion of "The Role of the Auxiliary in the Future of American Medicine—A Challenge," by Mrs. S. H. Kirkham, when it met June 25 at Columbus. Mrs. James H. Wooten, Jr., president, read the constitution of the State Medical Auxiliary, and the local group decided to draw up its own constitution in the near future. The auxiliary joined the medical society

for a chicken barbecue supper following the meeting.

Gregg County Auxiliary held its first postwar meeting July 16 at the Longview home of Mrs. Ben Andres, retiring president. New officers elected include Mrs. W. P. Farrar, president; Mrs. W. M. Routon, Kilgore, vice-president; Mrs. R. C. Crawford, secretary; Mrs. W. M. Cole, treasurer; and Mrs. John Wensley, publicity chairman. Eleven guests were served iced "cokes," open face sandwiches, potato chips, salted nuts and miniature cinnamon rolls. Asters in shades of purple centered the dining table and multicolored garden flowers decorated the rooms.

Twelfth District Auxiliary met in Corsicana on July 9, holding a business session at Corsicana Country Club in the morning; joining the Medical Society for a luncheon given by Navarro County Medical Society, at which Dr. H. Frank Carman, Dallas, spoke on tuberculosis; and being entertained in the afternoon at the home of Mrs. W. K. Logsdon. Assisting Mrs. Logsdon with arrangements were Mesdames W. R. Sneed and L. E. Kelton, Jr.

Mrs. R. B. Homan, El Paso, for many years active in medical auxiliary work, died July 31, 1946. Mrs. Homan served on various committees of the State Auxiliary prior to becoming its president for the 1936-1937 term. She was Council Woman of the El Paso District for four terms and helped organize the El Paso County Auxiliary in 1922. In 1928 she was elected honorary life president of the county auxiliary. Mrs. Homan was the mother of Dr. R. B. Homan, Jr., of El Paso.

Mrs. M. P. Schuster, 82, pioneer El Pasoan and past president of El Paso County Auxiliary, died July 29, 1946, after a short illness. She was particularly interested in Pan-American activities, was a past president of the Women's Club, and a member of the Presbyterian Church, Chamber of Commerce, Charity Association of El Paso, and the old Civic Club. She is survived by two sons, Drs. S. A. and Frank Schuster; two daughters, Mrs. Regina Schuster Rabb and Mrs. Margaret Schuster Marshall, all of El Paso; nine grandchildren; and three great-grandchildren.

BOOK NOTES

New and Nonofficial Remedies, 1946, containing descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on Jan. 1, 1946. Cloth, 770 pages. Price, postpaid, $1.50. Chicago, American Medical Association, 1946.

"New and Nonofficial Remedies" is the book in which are listed and described the medicinal preparations which the Council on Pharmacy and Chemistry has found acceptable, under its rules, for the use of physicians. To have a product accepted, the manufacturer must declare its composition, give adequate proof of its therapeutic value, and market it with claims which have been found valid by the Council. The present volume represents a cumulative epitome of the Council's work since its foundation in 1905.

Accepted preparations are grouped in twenty-four classifications ranging from Allergenic Preparations to Vitamins. Ordinarily, an inclusive general article precedes the description of the various products. The monograph for the products sets forth the actions, uses, and dosage and usually a set of tests and standards. As its name implies, the book is intended to describe nonofficial preparations, that is preparations which are not included in such official publications as the "Pharmacopeia" and the "National Formulary." However, some official articles are listed and described, these being in general those for which the Council feels the practicing physician needs concise and authoritative information. In the preface of the present volume, the Council lists some thirty-five official drugs ranging from acetylsalicylic acid to Strophanthin, which the Council feels it no longer necessary to consider for inclusion in the book. However, in most cases, a brief monograph on actions, uses, and dosage gives information useful to the physician and for the control and advertising of marketed preparations.

Examination of the volume reveals that there have been no extensive or radical revisions of the general articles representing the twenty-four chapter heads under which preparations are classified. A few revisions of separate monographs may be mentioned: under Chaulmoogra Derivatives, the recommended use of Chaulmoogra Oil is limited to sarcoidosis; the dosage statement for Quinacrine Hydrochloride has been notably expanded to reflect the wartime experience with the drug. The radically revised monograph on Amphetamine is in harmony with the recent Council report on the use of this drug. Minor revisions of the chapter on Contraceptives are noted, and one marks the appearance of many additional products. The monograph on the Vitamin B Complex now mentions synthetic folic acid, recently made available for investigational use, but no accepted preparations are listed.

There appear to be no spectacularly new accepted preparations. Perhaps the most noteworthy is the casein hydrolysate, Amigen, acceptance of which will no doubt be followed by that of many more preparations representing the field of amino acid therapy.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1945. Cloth, 122 pages. Price, postpaid, $1.00. Chicago, American Medical Association, 1946.

Originally intended chiefly as a repository of its reports on rejection of preparations found unacceptable for inclusion in "New and Nonofficial Remedies" or of status reports on products whose therapeutic value has not yet been established, this volume in recent years has been composed mainly of reports giving general information to the physician on the status of various therapeutic agents and therapeutic procedures. Most of these reports have previously been published in *The Journal of the American Medical Association.* The reports in the present volume emphasize the educational nature of the Council's work and bear witness to its leadership in the consideration of current therapeutic problems.

The report "Dermatophytosis: Treatment and Prophylaxis," gives a concise estimate of progress in this field and sets up useful standards for the evaluation of fungicidal preparations. The report on "Dangers from the External Use of Sulfonamides," obviously stems from wartime experience with these preparations and issues a warning against over-the-counter sales. The report "Status of Poison Ivy Extracts" emphasizes the fact that these preparations are to be used in prevention rather than treatment. The report on Acne Bacillus Vaccine points out that this preparation, in the opinion of most investigators, fails in most cases clinically to arrest or control acne vulgaris. In the report "The Status of Passive Immunization and Treatment in Pertussis by the Use of Human Hyperimmune Serum" prepared by Dr. Harriet M. Felton and sponsored by the Council, the status of these preparations was definitively outlined just prior to the acceptance by the Council of a number of commercial preparations.

This volume as well as preceding Annual Reprints are of interest not only to physicians but also to pharmacists, chemists, and pharmaceutical manufacturers, in fact to all who are interested in the progress of drug therapy.

DEATHS*

Dr. Thomas Spaulding Williams, Dallas, Texas, died July 18, 1946, in a Dallas hospital of coronary occlusion complicated with peritonitis following an attack of diverticulitis.

Dr. Williams, son of Dr. Eugene and Annie Williams, was born October 9, 1890, at Kingston, Hunt County, Texas. He attended high school at Celeste and received his medical education from the Medical Department of Southern Methodist University, where he was graduated May 30, 1912. Immediately following his graduation he served a one year internship at St. Paul's Hospital, Dallas, and then began his practice in that city. During World War I he served in the British Army as assistant surgeon at Fuse Hill Hospital, Carlisle, England, and with the 61st Division, Gordon Highlanders. On his return to the United States in 1919 he was commissioned assistant surgeon, U. S. Public Health Service in Dallas. He had continued to practice in Dallas until his death. Dr. Williams did postgraduate work at the New York School of Medicine.

DR. THOMAS S. WILLIAMS

Since 1918 Dr. Williams was a member of the State Medical Association and American Medical Association through Dallas County Medical Society. He was a member of the St. Paul's Hospital staff for more than thirty years, a member of the Methodist Hospital staff, on the Dallas Board of Health for ten years, and a member of the Methodist Church.

Dr. Williams on December 31, 1913, married Miss Frances Dole, of Dallas, who survives. Also surviving are his mother, Mrs. Annie Williams, and a sister, Mrs. E. T. Fry, Sr., both of Greenville.

Dr. Hatch Whitfield Cummings died July 29, 1946, at his home in Hearne, Texas, of arteriosclerosis.

Dr. Cummings was born September 14, 1869, in Aberdeen, Miss., the son of Mason Monroe and Amelia (Watkins) Cummings. His early education was received in the public schools of Fulton, Miss. His medical education was obtained in the medical department of the University of Tennessee, from which he was graduated in 1892. During his professional career he had taken postgraduate work in the New York Polyclinic and clinical centers in Chicago, New Orleans, and Philadelphia. He had been a regular attendant during his years of active practice at Annual Sessions of the State Medical Association and at postgraduate clinics in Dallas and Houston.

Shortly after his graduation he located in Hearne, Texas, where he was in active practice for fifty-two years. In addition to a busy general practice he served for many years as local surgeon for the Missouri Pacific and Southern Pacific Railways. He had been retired for the past few years because of his health.

DR. H. W. CUMMINGS

Dr. Cummings was one of the organizers and first president of the Brazos Valley Medical Association in 1896. He was a lifelong member of the American Medical Association and the State Medical Association. He was a charter member of the Brazos-Robertson Counties Medical Society, which he served as president continuously from 1927 through 1931. Dr. Cummings served his county medical society also as a delegate to the State Medical Association for many years. He was Chairman of the Section on State Medicine and Public Hygiene of the State Medical Association in 1910 and again in 1919. He also served the State Medical Association as Councilor of the Eleventh District from 1906 to 1907 and Councilor of the Twelfth District from 1907 to 1908. He was president of the State Medical Association in the years 1908-1909.

In addition to these offices held in the State Medical Association, perhaps the most outstanding service rendered by Dr. Cummings to the Association was in legislative work. He was a member of the Committee on Legislation and Public Instruction of the Association from 1923 to 1925. After the establishment of the present Legislative Committee of the State Medical Association, taking the place of this committee, he served continuously as its chairman from 1925 to 1942. During these years, Dr. Cummings gave abundantly of his time, talents, and wise counsel in all legislative matters in which the Association was interested. He made innumerable trips to Austin to represent the Association in hearings on important medical and public health bills.

Dr. Cummings served the state of Texas in important capacities. He was a member of the State Board of Health from 1909 to 1911. He served as a member of the Texas State Board of Medical Examiners from 1925 to 1935, and as president of the Board from 1927 through 1930. During his tenure of office on the Board he had served on all of its important committees.

In addition to a busy general practice and his many contributions to medical organizations and the state, Dr. Cummings found time for leadership in civic and community affairs. He served as president of the Hearne School Board for eighteen years. He was also president of the Hearne Building and Loan Association for thirty-five years, of the Planters and Merchants State Bank, Chamber of Com-

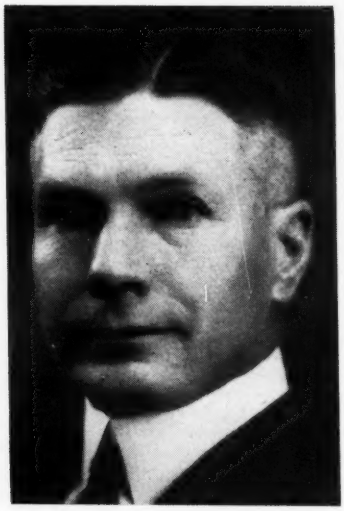
*An obituary ordinarily will not be published more than four months after date of death. Coöperation in reporting deaths of physicians and in furnishing appropriate biographical material promptly is solicited.

merce, Rotary Club, and X-All Highwav Association. He had been a member of the Board of Stewards of the Hearne Methodist Church since 1894 and had served as president of the Board for many years. He had also served as superintendent of the Sunday school. He took an active interest in political affairs of the community and the state and served for six years as a member of the State Democratic Executive Committee.

Dr. Cummings was married December 21, 1897, to Miss Pauline Eckerle at Hearne. He is survived by his wife; one son, Dr. H. W. Cummings, Jr., Houston; four daughters, Mrs. A. B. Swanson, Austin; Mrs. E. Ghent Graves, Houston; Mrs. T. P. Haynie, Jr., Hearne; Mrs. John A. Barclay, Austin; eight grandchildren; and one great grandchild. He is also survived by a brother, B. Y. Cummings, Dallas; and two sisters, Mrs. George A. Duren, Dallas, and Mrs. Sam A. Montgomery, Houston.

Dr. John Burr Miller, San Antonio, Texas, died June 11, 1946, of malignancy of the brain.

The son of Jesse and Eveline Miller, Dr. Miller was born November 8, 1876, in Galena, Ohio. He attended Otterbein University in Westerville, Ohio, and in 1910 took his medical degree from Starling-Ohio Medical College (now Ohio State University College of Medicine). He came to Texas, locating first in Falfurrias and then moving in 1918 to San Antonio, where he was in practice until his death.



DR. JOHN BURR MILLER

Dr. Miller was a member of the State Medical Association and American Medical Assotion through Kleberg County Medical Society and then through Bexar County Medical Society. From 1910 until 1918 he was local physician and surgeon for the San Antonio and Aransas Pass Railroad. He was a member of the Christian Church, the Masonic Order, Scottish Rite, Shrine, Sons of Herman, and Jesters.

Survivors include his wife, the former Miss Maude L. Waterman, whom Dr. Miller married in Payette, Idaho, December 24, 1898; one daughter, Mrs. William Turnbull, and one son, Dr. John B. Miller, Jr., both of San Antonio; one sister, Mrs. Lillie Morris, Madison, Ala.; and two brothers, Otto Miller, Monte Vista, Colo., and Arthur Miller, Westerville, Ohio.

Dr. Edwin Ball Hailey, Conroe, Texas, died at his home July 16, 1946.

Dr. Hailey, son of Samuel K. and Mary Sue (Ball) Hailey, was born December 25, 1905, in Conroe and attended high school there. His academic education was received from the University of Texas, Austin, where he took a bachelor of science degree in 1928, and his medical education from the University of Texas Medical Branch, Galveston, where he was graduated in 1932. He served a one year internship at John Sealy Hospital, Galveston, and then returned to Conroe to practice, remaining there until his death.

Throughout his professional career Dr. Hailey was a member of the State Medical Association and American Medical Association through Montgomery County Medical Society. He was president of the county society from 1935 until his death. He was a member of the Methodist Church, Masonic Lodge, Rotary Club, Phi Kappa Alpha, and Alpha Mu Pi Omega Medical fraternity.

On July 15, 1933, in Galveston, Dr. Hailey married Miss Catherine Lucile Weaver, who survives. Also surviving are two sons, David Edwin Hailey and Richard Lee Hailey; his parents, Mr. and Mrs. S. K. Hailey; two sisters, Mrs. J. M. Coleman and Mrs. P. D. Evans; and one brother, Samuel K. Hailey, Jr., all of Conroe.

Dr. Travis M. Harrell, Corpus Christi, Texas, died February 22, 1946.

The son of Frank and Mollie Harrell, Dr. Harrell was born February 8, 1864, at San Saba. When he was 7 years old, he moved with his parents to Williamson County, and attended school at Round Rock. He went to medical school in Baltimore and then in Louisville, Ky., receiving his degree from the University of Louisville School of Medicine in 1894. Dr. Harrell first practiced medicine at Hunter, Texas then in Round Rock, and after 1922 in Corpus Christi.

DR. TRAVIS M. HARRELL

Throughout his professional career Dr. Harrell was a member of the State Medical Association and the American Medical Association, through Williamson County Medical Society, and then through Nueces County Medical Society when he moved to Corpus Christi. He was a member of the Texas Railway and Traumatic Surgical Association and its first vice-president at the time of his death. He was also a member of Woodmen of the World. He was a member of the Methodist Church and made extensive contributions to its causes, donating the Memorial Chapel to the Methodist Orphanage at Waco, an endowment fund to Southwestern Universiy at Georgetown, and a pipe organ to the Methodist Church at Corpus Christi.

On October 31, 1888, Dr. Harrell married Miss Maggie Faubion, of Leander, and to this union was born a son, Presley Harrell. Both son and wife preceded Dr. Harrell in death, Mrs. Harrell dying May 27, 1939. Dr. Harrell married Mrs. Vira Douglas on July 12, 1940. She; two stepsons, Ramey Douglas and Otho Douglas, both of Corpus Christi; and four sisters, Mrs. Ardella McFarlan, Austin; Miss Fannie Harrell, Round Rock; Mrs. May Sullivan, Houston; and Mrs. Cloie Kilgore, Yakima, Wash., survive.